

ANALYTICAL REPORT

Lab Number:

L1417111

Client:

Environmental Health & Engineering Inc.

117 Fourth Ave

Needham, MA 02494

ATTN:

Taeko Minegishi

Phone:

(781) 247-4300

Project Name:

Not Specified

Project Number:

19374

Report Date:

08/07/14

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Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Not Specified

Project Number:

19374

Lab Number:

L1417111

Report Date:

08/07/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1417111-01	154923	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-02	154924	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-03	154925	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-04	154926	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-05	154927	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-06	154928	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-07	154929	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-08	154930	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-09	154931	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-10	154932	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-11	154933	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-12	154934	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-13	154935	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-14	154936	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-15	154937	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-16	154938	SOLID	Not Specified	07/30/14 00:00	07/31/14
L1417111-17	154939	SOLID	Not Specified	07/30/14 00:00	07/31/14



Not Specified

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Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.



Project Name:

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Project Number:

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08/07/14

Case Narrative (continued)

PCBs

L1417111-01, -03, -06, -07, -09, and -16: The surrogate recoveries are below the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene and decachlorobiphenyl (all 0%) due to the dilutions required to quantitate the samples. Re-extraction was not required; therefore, the results of the original analyses are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Scarbon Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 08/07/14



ORGANICS



PCBS



Project Name: Not Specified

Lab Number:

Project Number: 19374

Report Date:

L1417111 08/07/14

SAMPLE RESULTS

L1417111-01 D Client ID: 154923 Not Specified Sample Location:

Matrix: Solid

Analytical Method: 1,8082A Analytical Date: 08/05/14 07:34

Analyst: TQ

Lab ID:

Percent Solids:

Results reported on an 'AS RECEIVED' basis.

Date Collected: Date Received: 07/30/14 00:00

07/31/14 Field Prep: Not Specified

Extraction Method: Extraction Date:

EPA 3580A

Cleanup Method:

08/01/14 08:24 EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14 EPA 3660B

Cleanup Date:

08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor.	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	4460000		1000	Α
Aroclor 1221	ND		ug/kg	4460000		1000	Α
Aroclor 1232	ND		ug/kg	4460000		1000	Α
Aroclor 1242	ND		ug/kg	4460000		1000	Α
Aroclor 1248	ND		ug/kg	4460000		1000	Α
Aroclor 1254	31700000		ug/kg	4460000		1000	В
Aroclor 1260	47100000		ug/kg	4460000		1000	В
Aroclor 1262	ND		ug/kg	4460000	**	1000	Α .
Aroclor 1268	ND	•	ug/kg	4460000		1000	Α
PCBs, Total	78800000		ug/kg	4460000		1000	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachioro-m-xylene	0	Q	30-150	Α
Decachlorobiphenyl	0	Q	30-150	Α
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В



Project Name: Not Specified

Project Number: 19374

SAMPLE RESULTS

D

Lab Number: Report Date:

L1417111

08/07/14

Lab ID: Client ID: L1417111-02

154924

Sample Location: Matrix: Solid

Not Specified

Analytical Method:

1,8082A

Analytical Date: Analyst:

08/07/14 12:53

Percent Solids:

TQ

Results reported on an 'AS RECEIVED' basis.

Date Collected:

07/30/14 00:00 07/31/14

Date Received: Field Prep: Extraction Method:

Not Specified EPA 3540C

Extraction Date: Cleanup Method: 08/05/14 14:26 EPA 3630

Cleanup Date: Cleanup Method:

08/06/14 EPA 3665A

Cleanup Date: Cleanup Method: Cleanup Date:

08/06/14 EPA 3660B 08/06/14

Parameter		Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborougl	n Lab							
Aroclor 1016		ND		ug/kg	4330	· · · ·	2	Α
Aroclor 1221		ND		ug/kg	4330		2	А
Aroclor 1232		ND		ug/kg	4330		2	Α
Aroclor 1242		ND		ug/kg	4330		2	В
Aroclor 1248		ND		ug/kg	4330		2	A
Aroclor 1254		27900		ug/kg	4330		2	В
Aroclor 1260		6080		ug/kg	4330		2	В
Aroclor 1262		ND		ug/kg	4330		2	Α
Aroclor 1268		ND		ug/kg	4330		2	A
PCBs, Total	*****	34000	***	ug/kg	4330		2	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	Α
Decachlorobiphenyl	88		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	90		30-150	В
Decachlorobiphenyl	87		30-150	В

Project Name: Not Specified

Lab Number:

L1417111

08/07/14

Project Number:

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Report Date: **SAMPLE RESULTS**

Lab ID: Client ID: L1417111-03

154925

Sample Location:

Not Specified

Matrix:

Solid

Analytical Method: Analytical Date:

1,8082A

Analyst:

TQ

Percent Solids:

08/05/14 07:48

Results reported on an 'AS RECEIVED' basis.

D

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified EPA 3580A

Extraction Method: **Extraction Date:**

08/01/14 08:24

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14 EPA 3660B

Cleanup Date:

08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	4130000		1000	Α
Aroclor 1221	ND		ug/kg	4130000		1000	Α
Aroclor 1232	ND		ug/kg	4130000		1000	Α
Aroclor 1242	ND		ug/kg	4130000		1000	Α
Aroclor 1248	ND		ug/kg	4130000	w	1000	Α
Aroclor 1254	25600000		ug/kg	4130000		1000	В
Aroclor 1260	38700000		ug/kg	4130000		1000	В
Aroclor 1262	ND		ug/kg	4130000		1000	Α
Aroclor 1268	ND		ug/kg	4130000		1000	Α
PCBs, Total	64300000		ug/kg	4130000		1000	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	Α
Decachlorobiphenyl	0	Q	30-150	Α
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В



Lab Number:

L1417111

SAMPLE RESULTS

19374

Report Date:

08/07/14

Lab ID:

L1417111-04

Not Specified

Client ID:

154926

Sample Location:

Project Name:

Project Number:

Not Specified

Matrix:

Solid

Analytical Method:

1,8082A

Analytical Date:

08/07/14 04:44

Analyst:

Percent Solids:

TQ

Results reported on an 'AS RECEIVED' basis.

Date Collected:

07/30/14 00:00

Date Received: Field Prep:

07/31/14

Extraction Method: Extraction Date:

Not Specified EPA 3540C

Cleanup Method:

08/05/14 14:26 EPA 3630

Cleanup Date: Cleanup Method: 08/06/14 EPA 3665A

Cleanup Date: Cleanup Method:

Cleanup Date:

08/06/14 EPA 3660B

08/06/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilut
	·					

raidilleter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2190		1	Α
Aroclor 1221	ND		ug/kg	2190		1	A
Aroclor 1232	ND		ug/kg	2190		1	Α
Aroclor 1242	ND		ug/kg	2190		1	В
Aroclor 1248	ND		ug/kg	2190		1	Α
Aroclor 1254	18800		ug/kg	2190		1	Á
Aroclor 1260	3470		ug/kg	2190		1	Α
Aroclor 1262	ND		ug/kg	2190		1	Α
Aroclor 1268	ND		ug/kg	2190		1	Α
PCBs, Total	22300	•	ug/kg	2190		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86	·	30-150	A
Decachlorobiphenyl	78		30-150	A
2,4,5,6-Tetrachtoro-m-xylene	82		30-150	В
Decachlorobiphenyl	79		30-150	В

Not Specified Lab Number:

Project Name: L1417111 **Project Number:** 19374 Report Date: 08/07/14

SAMPLE RESULTS

Lab ID: L1417111-05 Date Collected: 07/30/14 00:00

Client ID: 154927 Date Received: 07/31/14 Sample Location: Not Specified Field Prep: Not Specified

Matrix: Solid Extraction Method: EPA 3540C Analytical Method: 1,8082A **Extraction Date:** 08/05/14 14:26 Analytical Date: 08/07/14 04:58 Cleanup Method: **EPA 3630**

Analyst: TQ Cleanup Date: 08/06/14 Percent Solids: Results reported on an 'AS RECEIVED' basis. Cleanup Method: **EPA 3665A**

Cleanup Date: 08/06/14 Cleanup Method: **EPA 3660B** Cleanup Date: 08/06/14

Parameter Result Qualifier MDL Units RL **Dilution Factor** Column PCB by GC - Westborough Lab Aroclor 1016 ND ug/kg 2290 Α Aroclor 1221 ND ug/kg 2290 Α Aroclor 1232 ND ug/kg 2290 Α Aroclor 1242 ND 2290 ug/kg В Aroclor 1248 ND ug/kg 2290 Α Aroclor 1254 2980 ug/kg 2290 В 1 Aroclor 1260 ND ug/kg 2290 Α Aroclor 1262 ND 2290 ug/kg Α Aroclor 1268 ND ug/kg 2290 Α

ug/kg

2290

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	. 52		30-150	Α
Decachlorobiphenyl	46		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	50		30-150	В
Decachlorobiphenyl	49		30-150	В

2980



Α

PCBs, Total

07/30/14 00:00

Not Specified Lab Number:

Project Name: L1417111 **Project Number:** 19374 Report Date: 08/07/14

SAMPLE RESULTS

Lab ID: L1417111-06 D Client ID: 154928 Sample Location: Not Specified

Matrix: Solid Analytical Method: 1,8082A Analytical Date: 08/05/14 08:01

Analyst: TQ

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Received: 07/31/14 Field Prep: Not Specified Extraction Method: EPA 3580A Extraction Date: 08/01/14 08:24 Cleanup Method: EPA 3665A Cleanup Date: 08/02/14

Date Collected:

Cleanup Method: EPA 3660B Cleanup Date: 08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	NĐ		ug/kg	1700000		500	Α
Aroclor 1221	ND		ug/kg	1700000	**	500	Α
Aroclor 1232	ND		ug/kg	1700000		500	A
Aroclor 1242	ND		ug/kg	1700000		500	Α
Aroclor 1248	ND		ug/kg	1700000		500	Α
Aroclor 1254	22500000		ug/kg	1700000		500	В
Aroctor 1260	27400000		ug/kg	1700000		500	В
Aroclor 1262	ND		ug/kg	1700000		500	Α
Aroclor 1268	ND		ug/kg	1700000		500	Α
PCBs, Total	49900000		ug/kg	1700000	···	500	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	Α
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В

Project Name: Not Specified

40074

Lab Number:

L1417111

Project Number:

19374

Report Date: SAMPLE RESULTS

08/07/14

Lab ID:

L1417111-07

D

Date Collected:

07/30/14 00:00

Client ID:

154929

Date Received:

07/31/14

Sample Location:

Not Specified

Field Prep:

Not Specified

Matrix: Analytical Method: Solid 1,8082A Extraction Method: Extraction Date:

EPA 3580A 08/01/14 08:24

Analytical Date:

Percent Solids:

08/05/14 08:14

Cleanup Method:

EPA 3665A

Analyst:

TQ

Results reported on an 'AS RECEIVED' basis.

Cleanup Date: Cleanup Method: 08/02/14 EPA 3660B

Cleanup Date:

08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	4500000		1000	Α
Aroclor 1221	ND	,	ug/kg	4500000		1000	Α
Aroclor 1232	ND		ug/kg	4500000	***	1000	Α
Aroclor 1242	ND		ug/kg	4500000	**	1000	Α
Aroclor 1248	ND		ug/kg	4500000		1000	Α
Aroclor 1254	30900000		ug/kg	4500000		1000	В
Aroclor 1260	37900000		ug/kg	4500000	***	1000	В
Aroclor 1262	ND		ug/kg	4500000		1000	Α
Aroclor 1268	ND		ug/kg	4500000		1000	Α
PCBs, Total	68800000		ug/kg	4500000	· <u></u>	1000	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	А
Decachlorobiphenyl	0	Q	30-150	Α
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В



Project Name: Not Specified

Project Number: 19374

SAMPLE RESULTS

Lab ID: L1417111-08

Client ID:

154930

Sample Location:

Not Specified

Matrix:

Solid

Analytical Method: Analytical Date:

1,8082A

08/07/14 05:12

Analyst:

TQ

Percent Solids:

Results reported on an 'AS RECEIVED' basis.

Date Collected:

07/30/14 00:00

L1417111

08/07/14

Date Received:

Lab Number:

Report Date:

07/31/14

Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C

Cleanup Method:

08/05/14 14:26

Cleanup Date:

EPA 3630 08/06/14

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/06/14 EPA 3660B

Cleanup Date:

08/06/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	6410		1	Α
Aroclor 1221	ND		ug/kg	6410		1	Α
Aroclor 1232	ND		ug/kg	6410		1	Α
Aroclor 1242	ND		ug/kg	6410		1	Α
Aroclor 1248	ND	!	ug/kg	6410		1	Α
Arocior 1254	ND		ug/kg	6410		1	В
Aroclor 1260	ND	•	ug/kg	6410		1	Α
Aroclor 1262	ND		ug/kg	6410		1	Α
Arodor 1268	ND		ug/kg	6410		1	Α
PCBs, Total	ND		ug/kg	6410		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	84		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	88		30-150	В
Decachlorobiphenyl	85		30-150	В

Project Name: Not Specified

Project Number: 19374

SAMPLE RESULTS

Lab ID: Client ID:

154931

Sample Location:

Not Specified

Matrix: Analytical Method:

Solid 1,8082A 08/05/14 08:28

Analytical Date: Analyst:

Percent Solids:

L1417111-09

D

TQ

Results reported on an 'AS RECEIVED' basis.

Date Collected:

Field Prep:

Lab Number:

Report Date:

07/30/14 00:00

Date Received:

07/31/14 Not Specified

L1417111

08/07/14

Extraction Method: Extraction Date:

EPA 3580A 08/01/14 08:24

Cleanup Method: Cleanup Date:

EPA 3665A 08/02/14

Cleanup Method: Cleanup Date:

EPA 3660B 08/02/14

Parameter	Result	Qualifier	Units	RL ·	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1970000		500	Α
Aroclor 1221	ND		ug/kg	1970000		500	· A
Arodor 1232	ND		ug/kg	1970000		500	Α
Aroclor 1242	ND		ug/kg	1970000		500	Α
Aroclor 1248	ND		ug/kg	1970000		500	Α
Aroclor 1254	15000000		ug/kg	1970000		500	В
Aroclor 1260	19100000		ug/kg	1970000		500	В
Aroclor 1262	ND		ug/kg	1970000	4-4	500	Α
Aroclor 1268	ND		ug/kg	1970000		500	Α
PCBs, Total	34100000		ug/kg	1970000		500	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	Α
Decachlorobiphenyl	. 0	Q	30-150	Α
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В



Project Name: Not Specified

Project Number: 19374

Lab ID:

SAMPLE RESULTS

L1417111-10

Client ID: 154932
Sample Location: Not Specified
Matrix: Solid

Analytical Method: 1,8082A
Analytical Date: 08/07/14 05:25

Analyst: TQ

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected:

Cleanup Method:

Lab Number:

Report Date:

07/30/14 00:00

EPA 3665A

L1417111

08/07/14

Date Received: 07/31/14
Field Prep: Not Specified
Extraction Method: EPA 3540C

Extraction Date: 08/05/14 14:26
Cleanup Method: EPA 3630
Cleanup Date: 08/06/14

Cleanup Date: 08/06/14 Cleanup Method: EPA 3660B Cleanup Date: 08/06/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough I	Lab						
Aroclor 1016	ND		ug/kg	2450		1	Α
Aroclor 1221	ND		ug/kg	2450		1	Α
Aroclor 1232	ND		ug/kg	2450		1	Α
Aroclor 1242	ND		ug/kg	2450		1	Α
Aroclor 1248	ND		ug/kg	2450		1	A
Arocior 1254	ND		ug/kg	2450		1	Α
Aroclor 1260	ND		ug/kg	2450		1	Α
Aroclor 1262	ND		ug/kg .	2450		1	Α
Arocior 1268	ND		ug/kg	2450		1	Α
PCBs, Total	ND	• •	ug/kg	2450	***	1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	Α
Decachlorobiphenyl	84		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	82		30-150	В
Decachiorobiphenyl	81		30-150	В



Project Name: Not Specified

Lab Number:

SAMPLE RESULTS

L1417111

Report Date:

08/07/14

Lab ID:

L1417111-11

Client ID:

154933

Sample Location:

Project Number:

Not Specified

Matrix:

Solid

19374

Analytical Method: Analytical Date:

1,8082A

Analyst:

08/07/14 05:39

Percent Solids:

TQ

Results reported on an 'AS RECEIVED' basis.

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C 08/05/14 14:26

Cleanup Method:

EPA 3630

Cleanup Date:

08/06/14

Cleanup Method: Cleanup Date:

EPA 3665A 08/06/14

Cleanup Method: Cleanup Date:

EPA 3660B 08/06/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	1890		1	Α
Aroclor 1221	ND		ug/kg	1890	***	1	Α
Aroclor 1232	ND		ug/kg	1890		1	Α
Aroclor 1242	NĐ		ug/kg	1890		1	Α
Aroclor 1248	ND		ug/kg	1890		1	Α
Aroclor 1254	ND		ug/kg	1890		1	Α
Aroclor 1260	ND		ug/kg	1890		1	Α
Aroclor 1262	ND		ug/kg	1890		1	Α
Aroclor 1268	ND		ug/kg	1890		1	Α
PCBs, Total	. ND		ug/kg	1890		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	Α
Decachlorobiphenyl	82		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	83		30-150	В
Decachlorobiphenyl	82		30-150	В



Project Name: Not Specified Lab Number:

L1417111 **Project Number:** 19374 Report Date: 08/07/14

SAMPLE RESULTS

Lab ID: L1417111-12 Date Collected: 07/30/14 00:00 Client ID: 154934 Date Received: 07/31/14 Sample Location: Not Specified Field Prep: Not Specified Matrix: Solid Extraction Method: EPA 3540C Analytical Method: 1,8082A Extraction Date: 08/05/14 14:26 Analytical Date: 08/07/14 05:53 Cleanup Method: EPA 3630

Analyst: TQ Cleanup Date: 08/06/14 Percent Solids: Results reported on an 'AS RECEIVED' basis. Cleanup Method:

EPA 3665A Cleanup Date: 08/06/14 Cleanup Method: EPA 3660B

Cleanup Date: 08/06/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2380	_	1	Α
Aroclor 1221	ND		ug/kg	2380	•	1	Α
Aroclor 1232	ND		ug/kg	2380		1	Α
Aroclor 1242	ND		ug/kg	2380		1	Α
Aroclor 1248	ND		ug/kg	2380		1	Α
Aroclor 1254	ND		ug/kg	2380		1	Α
Aroclor 1260	ND		ug/kg	2380		1	Α
Aroclor 1262	ND		ug/kg	2380		1	Α
Aroclor 1268	ND		ug/kg	2380	-	1	Α
PCBs, Total	ND		ug/kg	2380		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	Α
Decachlorobiphenyl	64		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	83		30-150	В
Decachlorobiphenyl	. 76		30-150	В

Project Name: Not Specified

Lab Number:

L1417111

Project Number:

19374

Report Date:

08/07/14

Lab ID:

L1417111-13

Client ID:

154935

Sample Location:

Not Specified

Matrix:

Solid

Analytical Method:

1,8082A

Analytical Date:

08/07/14 06:07

Analyst:

TQ

Percent Solids:

Results reported on an 'AS RECEIVED' basis.

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified EPA 3540C

Extraction Method: **Extraction Date:**

08/05/14 14:26

Cleanup Method: Cleanup Date:

EPA 3630 08/06/14

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/06/14 EPA 3660B

Cleanup Date:

08/06/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2180		. 1	Α
Aroclor 1221	ND		ug/kg	2180		1	Α
Aroctor 1232	ND		ug/kg	2180		1	Α
Aroclor 1242	ND		ug/kg	2180		1 .	Α
Aroclor 1248	ND		ug/kg	2180		1	Α
Aroctor 1254	ND		ug/kg	2180		1	Α
Aroclor 1260	ND		ug/kg	2180	***	1	Α
Aroctor 1262	ND		ug/kg	2180		1	Α
Aroclor 1268	. ND		ug/kg	2180		1	Α
PCBs, Total	ND		ug/kg	2180		1	Α

SAMPLE RESULTS

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	Α
Decachlorobiphenyl	58		30-150	А
2,4,5,6-Tetrachloro-m-xylene	62		30-150	8
Decachlorobiphenyl	61		30-150	. в



Lab Number:

L1417111

Report Date:

08/07/14

19374

SAMPLE RESULTS

Lab ID:

L1417111-14

Client ID:

154936

Sample Location:

Project Name:

Project Number:

Not Specified

Not Specified

Matrix:

Solid

Analytical Method:

1,8082A

Analytical Date:

08/07/14 06:20

Analyst:

Percent Solids:

TQ

Results reported on an 'AS RECEIVED' basis.

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C

Cleanup Method:

08/05/14 14:26 EPA 3630

Cleanup Date:

08/06/14

Cleanup Method: Cleanup Date:

EPA 3665A 08/06/14

Cleanup Method: Cleanup Date:

EPA 3660B 08/06/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column	
PCB by GC - Westborough Lab							Outum	
Aroclor 1016	ND		ug/kg	2450	 *********************************		Α	
Aroclor 1221	ND		ug/kg	2450		1	A	
Aroclor 1232	ND		ug/kg	2450		1	Α	
Aroclor 1242	ND		ug/kg	2450		1	A	
Aroclor 1248	ND		ug/kg	2450	··	 1	Α.	
Aroclor 1254	ND		ug/kg	2450		1	A	
Aroclor 1260	ND		ug/kg	2450		1	A	
Aroclor 1262	ND		ug/kg	2450		1	A	
Aroclor 1268	ND		ug/kg	2450	***	1	Α	
PCBs, Total	ND		ug/kg	2450		·	Α	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	. A
Decachlorobiphenyl	77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	В
Decachiorobiphenyl	75		30-150	В

Serial_No:08071416:09 **Project Name:** Not Specified Lab Number: L1417111 **Project Number:** 19374 Report Date: 08/07/14 **SAMPLE RESULTS** Lab ID: L1417111-15 Date Collected: 07/30/14 00:00 Client ID: 154937 Date Received: 07/31/14 Sample Location: Not Specified Field Prep: Not Specified Matrix: Solid Extraction Method: **EPA 3540C** Analytical Method: 1,8082A Extraction Date: 08/05/14 14:26 Analytical Date: 08/07/14 06:34 Cleanup Method: EPA 3630 Analyst: TQ Cleanup Date: 08/06/14 Percent Solids: Results reported on an 'AS RECEIVED' basis. Cleanup Method: EPA 3665A

Cleanup Date:

Cleanup Date:

Cleanup Method:

08/06/14

08/06/14

EPA 3660B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2140		1	A
Aroclor 1221	ND		ug/kg	2140		1	A
Aroclor 1232	ND		ug/kg	2140		1	A
Aroclor 1242	ND		ug/kg	2140		1	A
Aroclor 1248	ND		ug/kg	2140		1	Α
Aroclor 1254	ND	,	ug/kg	2140		1	Α
Aroclor 1260	ND	,	ug/kg	2140		1	Α
Aroclor 1262	ND		ug/kg	2140		1	A
Aroclor 1268	ND		ug/kg	2140		1	Α
PCBs, Total	ND		ug/kg	2140	***	1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	Α
Decachlorobiphenyl	87		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	84		30-150	В
Decachlorobiphenyl	85		30-150	В

Project Name: Lab Number: Not Specified Report Date: **Project Number:** 19374

L1417111

SAMPLE RESULTS

08/07/14

Lab ID: Client ID:

L1417111-16

Date Collected: Date Received: 07/30/14 00:00

Sample Location:

154938 Not Specified

07/31/14

Matrix:

Solid

Field Prep: Extraction Method:

Not Specified EPA 3580A

Analytical Method: Analytical Date:

1,8082A 08/05/14 08:41

Extraction Date: Cleanup Method: 08/01/14 08:24

Analyst:

Cleanup Date:

EPA 3665A 08/02/14

TQ

Cleanup Method:

EPA 3660B

Percent Solids:

Results reported on an 'AS RECEIVED' basis.

D

Cleanup Date:

08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Arocior 1016	ND		ug/kg	1880000		500	Α
Aroclor 1221	ND		ug/kg	1880000		500	Α
Aroclor 1232	ND		ug/kg	1880000	·	500	Α
Aroclor 1242	ND		ug/kg	1880000		500	Α
Aroclor 1248	ND		ug/kg	1880000		500	Α
Aroclor 1254	24500000		ug/kg	1880000		500	В
Aroclor 1260	28800000		ug/kg	1880000		500	В
Aroclor 1262	ND		ug/kg	1880000		500	Α
Aroclor 1268	ND		ug/kg	1880000	+	500	Α
PCBs, Total	53300000		ug/kg	1880000		500	A
Surrogate	% Recovery	Qualif	ier	Acceptance Criteria	Column		

Surrogate	% Recovery	Qualifíer	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	А
Decachlorobiphenyl	0	Q	30-150	Α
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	В
Decachlorobiphenyl	0	Q	30-150	В

Project Name: Not Specified Lab Number:

L1417111

Project Number:

19374

Report Date: **SAMPLE RESULTS**

08/07/14

Lab ID:

L1417111-17

Client ID:

154939

Sample Location:

Not Specified

Matrix:

Solid

Analytical Method: Analytical Date:

1,8082A 08/07/14 06:47

Analyst:

TQ

Percent Solids:

Results reported on an 'AS RECEIVED' basis.

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep: Extraction Method: Not Specified EPA 3540C

Extraction Date:

08/05/14 14:26

Cleanup Method: Cleanup Date:

EPA 3630 08/06/14

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method:

08/06/14 EPA 3660B

Cleanup Date:

08/06/14

Parameter	Resúlt	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough L	ab						
Aroclor 1016	ND		ug/kg	2480		1	Α
Aroclor 1221	ND		ug/kg	2480		1	Α
Aroclor 1232	ND		ug/kg	2480		1	Α
Aroclor 1242	ND		ug/kg	2480		1	Α
Aroclor 1248	ND		ug/kg	2480		1	A
Aroclor 1254	ND		ug/kg	2480		1	Α
Aroclor 1260	ND		ug/kg	2480		1	Α
Aroclor 1262	ND		ug/kg	2480	***	1	Α
Aroclor 1268	ND		ug/kg	2480		1	Α
PCBs, Total	ND		ug/kg	2480		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	35		30-150	A
Decachlorobiphenyl	29	Q	30-150	Α
2,4,5,6-Tetrachioro-m-xylene	35		30-150	В
Decachlorobiphenyl	34		30-150	В



08/02/14

Project Name:

Not Specified

Project Number:

19374

Lab Number:

L1417111

Report Date:

08/07/14

Method Blank Analysis **Batch Quality Control**

Analytical Method:

Analytical Date:

Analyst:

TQ

1,8082A

08/04/14 01:56

Extraction Method:

EPA 3580A

Extraction Date:

08/01/14 08:24

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14

Cleanup Date:

EPA 3660B 08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
PCB by GC - Westborou	gh Lab for sample(s):	01,03,06-	07,09,16	Batch: WG	710506-1	
Aroclor 1016	ND		ug/kg	2580		A
Aroclor 1221	ND		ug/kg	2580		Α
Aroclor 1232	ND		ug/kg	2580		Α
Aroclor 1242	ND		ug/kg	2580		Α
Aroclor 1248	ND		ug/kg	2580		Α
Aroclor 1254	ND		ug/kg	2580	-	Α
Aroclor 1260	ND		ug/kg	2580		Α
Aroclor 1262	ND		ug/kg	2580		Α.
Aroclor 1268	ND		ug/kg	2580		Α
PCBs, Total	ND		ug/kg	2580		Α

		,	Acceptance			
Surrogate	%Recovery	Qualifier	Criteria	Column		
2,4,5,6-Tetrachioro-m-xylene	123		30-150	Α		
Decachlorobiphenyl	135		30-150	A		
2,4,5,6-Tetrachloro-m-xylene	112	4	30-150	В		
Decachlorobiphenyl	129		30-150	В		



08/06/14

Project Name:

Not Specified

Project Number:

19374

Lab Number:

L1417111

Report Date:

08/07/14

Method Blank Analysis Batch Quality Control

Analytical Method:

Analytical Date:

Analyst:

1,8082A

08/07/14 07:01

TQ

Extraction Method: EPA 3540C

Extraction Date:

08/05/14 14:26

Cleanup Method:

EPA 3630

Cleanup Date:

08/06/14

Cleanup Method: Cleanup Date:

EPA 3665A 08/06/14

Cleanup Method:

EPA 3660B 08/06/14

Cleanup Date:

Parameter	Result	Qualifier	Units	RL	MDL	Column
PCB by GC - Westborough Lab fo	r sample(s):	02,04-05,	08,10-15,1	17 Batch: V	VG711338-	1
Aroclor 1016	, ND		ug/kg	2040		Α
Aroclor 1221	ND		ug/kg	2040		Α
Aroclor 1232	ND		ug/kg	2040	 ,	Α
Aroclor 1242	ND 1		ug/kg	2040		. A
Aroclor 1248	ND		ug/kg	2040		, Y
Aroclor 1254	ND		ug/kg	2040	<u></u>	Α
Aroclor 1260	ND		ug/kg	2040		Α
Aroclor 1262	ND		ug/kg	2040		Α
Aroclor 1268	ND		ug/kg	2040		Α
PCBs, Total	ND		ug/kg	2040		Α

Acceptance						
%Recovery	Qualifier	Criteria	Column			
72		30-150	Α			
71		30-150	Α			
68		30-150	· В			
70		30-150	В			
	72 71 68	%Recovery Qualifier 72 71 68	%Recovery Qualifier Criteria 72 30-150 71 30-150 68 30-150			



Lab Control Sample Analysis Batch Quality Control

Project Name:

Not Specified

Project Number:

19374

Lab Number:

L1417111

Report Date:

08/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
PCB by GC - Westborough La	ab Associated sample(s): 01,0	3,06-07,09,	16 Batch: WG7	10506-2 V	VG710506-3				
Aroclor 1016	105		109		40-140	4000		50	A
Arocior 1260	105		114		40-140	8		50	Α

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	Column
2,4,5,6-Tetrachioro-m-xylene	121		132		30-150	
Decachlorobiphenyl	135		149		30-150	A
2,4,5,6-Tetrachloro-m-xylene	112		122		30-150	В
Decachlorobiphenyl	126		136		30-150	В

Lab Control Sample Analysis Batch Quality Control

Project Name:

Not Specified

Project Number: 19374

Lab Number:

L1417111

Report Date:

08/07/14

•	LCS		LCSD		%Recovery			RPD	
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits	Column
DCD by CC Weethersuch		X 05 00 10	AE AT DEALS NA	C744000 0	14/07/14000	rattalaneAlletanide	nid her kretterstetskister	naka eri diri kirikista	terralisasitikasitaitek
-CB by GC - Westbolough L	ab Associated sample(s): 02,0	4-05,06,10	- 15, 17 Batch. VV	J/ 338-2	2 VVG/11338-3				
Andre Consider (1946) des como provinció de colo de la	illeren er til framen et det er er ste flyrende sere tivet angrilligeredd ag da ratisfæret måggigt fretti ablikali sener.	ik, 1-killeri keli kelekit keletik keletik e	ra lued lue ferse vida addie forderstrade also filosofice a filosofice a fere	innobusalah ketilik	orski redskradi, kodilika i potobleđenosti province.	alah kali albah sebagai kelah kecamba	ent Handesparen		
Aroclor 1016	i over til til en en skins et sett skunde en en til en att filmen kan en et blevår til skind et til skilde en e Og filmen en e	ut, gurantura ke ja kurik ti beger biburah	87	in podusel die Sweitel	40-140	######################################		50	A

	LCS		LCSD		Acceptance		
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	Column	
2,4,5,6-Tetrachioro-m-xylene	99		93		30-150	Α	
Decachlorobiphenyl	98		91		30-150	Α	
2,4,5,6-Tetrachloro-m-xylene	91		86		30-150	В	
Decachlorobiphenyl	94		87		30-150	В	



Project Name: N

Not Specified

Project Number: 19374

40074

Lab Number: L1417111

Report Date: 08/07/14

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on:

NA

Cooler Information Custody Seal Cooler

A

Absent

Container Info	ormation	Temp					
Container ID	Container Type	Cooler	рΗ	deg C	Pres	Seal	Analysis(*)
L1417111-01A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-02A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-03A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-04A	Amber 120ml unpreserved	A	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-05A	Amber 120ml unpreserved	Α	N/A	2.0	Y.	Absent	PCB-8082-CAULK(14)
L1417111-06A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-07A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-08A	Amber 120ml unpreserved	Α	N/A	. 2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-09A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	· PCB-8082-CAULK(14)
L1417111-10A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-11A	Amber 120ml unpreserved	Α .	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-12A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-13A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-14A	Amber 120ml unpreserved	Α	N/A	2.0	Y	Absent	PCB-8082-CAULK(14)
L1417111-15A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-16A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)
L1417111-17A	Amber 120ml unpreserved	Α	N/A	2.0	Υ	Absent	PCB-8082-CAULK(14)

Not Specified

Project Number: 19374

Lab Number:

L1417111

Report Date:

08/07/14

GLOSSARY

Acronyms

EDL

- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA

- Environmental Protection Agency.

LCS

- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD

- Laboratory Control Sample Duplicate: Refer to LCS.

LFB

- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL

- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS

- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD

- Matrix Spike Sample Duplicate: Refer to MS.

NA

- Not Applicable.

NC

- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI

- Not Ignitable.

RL

- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD

- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM

- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

Report Format: Data Usability Report



Not Specified

Project Number:

19374

Lab Number:

L1417111

Report Date:

08/07/14

Data Qualifiers

NJ

- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. H Ĭ

- The lower value for the two columns has been reported due to obvious interference.

- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. \mathbf{M}

- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Q Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Not Specified

Project Number:

. _ _ .

19374

Lab Number:

L1417111

Report Date:

08/07/14

REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, lodomethane (methyl iodide), Methyl methacrylate,

Azobenzene.

EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl. EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene,

Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; EPA 200.7: Ba,Be,Ca,Cd,Cr,Cu,Na; EPA 245.1: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C,

SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics.

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan I, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

L14176e jial_No:08071416:09

FROM: Environmental Health and Engineering, Inc. 117 Fourth Avenue

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In all correspon	ndence re	garding th	nis matter, please refe	er to EH&E F	Project #	1937	4	
The cost of this	analysis	will be co	overed by EH&E Purd	hase Order	# <u>· </u>			
	-		RGENT DATA					
SAMPLE ID	SAMPL	E TYPE	ANALY	R	OTHER:Time/Dat			
1549 23	BUI	_K	EPA	soxhlet	17/30	2/14		
154924	1	3		8082	. PCB	extraction	1	
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Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

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DATE: 7/30/14

FROM: Environmental Health and Engineering, Inc. 117 Fourth Avenue Needham, MA 02494-2725

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TO:	pha Analy	tical	Please send invoices to AT Please send reports to ATT	TN: Accounts Payable N: Data Coordinator
in all correspor	ndence regarding t	his matter, please refer	to EH&E Project #	9374
		overed by EH&E Purcha		
	ita Coordinator - U		ASS OTGET #	
SAMPLE ID	SAMPLE TYPE	ANALYTIC	OTHER:Time/Date/Vol.	
154939	BULK		PCB soxhlet extra	
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		report recipient Tmi	nezishi@eneinc.com	M
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APPENDIX C AIR SAMPLE LABORATORY REPORTS



ANALYTICAL REPORT

Lab Number:

L1417001

Client:

Environmental Health & Engineering Inc.

117 Fourth Ave

Needham, MA 02494

ATTN:

Taeko Minegishi

Phone:

(781) 247-4300

Project Name:

19374

Project Number:

19374

Report Date:

08/04/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806 508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: 19374 Project Number: 19374 Lab Number:

L1417001

Report Date:

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1417001-01	154898	AIR MEDIA	Not Specified		07/30/14
L1417001-02	154901	AIR MEDIA	Not Specified		07/30/14
L1417001-03	154902	AIR MEDIA	Not Specified		07/30/14
L1417001-04	154903	AIR MEDIA	Not Specified		07/30/14
L1417001-05	154904	AIR MEDIA	Not Specified		07/30/14
L1417001-06	154905	AIR MEDIA	Not Specified		07/30/14
L1417001-07	154907	AIR MEDIA	Not Specified		07/30/14
L1417001-08	154908	AIR MEDIA	Not Specified		07/30/14

Project Name:

19374

Project Number:

19374

Lab Number:

L1417001

Report Date:

08/04/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.



Project Name:

19374

Lab Number:

L1417001

Project Number:

19374

Report Date:

08/04/14

Case Narrative (continued)

PCBs in Air

Sample L1417001-01 had a non-target peak removed from the range of the Trichlorobiphenyl result.

The WG709972-2 LCS recovery for Cl2-BZ#4/#10 (154%), associated with L1417001-01 through -08, is outside the acceptance criteria for individual target compounds, but within the overall method allowances.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Galta Por Elizabeth Porta

Authorized Signature:

Title: Technical Director/Representative

Date: 08/04/14



ORGANICS



PCBS



Project Name: 19374

Project Number: 19374 Lab Number:

L1417001

Report Date:

08/04/14

SAMPLE RESULTS

Lab ID:

L1417001-01

Client ID:

154898

Sample Location:

Not Specified

Matrix:

Air Media

Analytical Method: Analytical Date:

105,8270D-SIM/NOAA-M

08/01/14 01:31

Analyst:

СM

Cl3-BZ#19-C13

CI8-BZ#202-C13

Date Collected:

Date Received:

07/30/14

Field Prep:

50-125

50-125

Not Specified

Extraction Method:

EPA 3540C

Extraction Date:

07/30/14 17:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (Lo	owVol) - Mansfield Lab					
Monochlorobiphenyls	ND .	n	ig/cart	10.0		1
Dichlorobiphenyls	ND	n	ig/cart	10.0		1
Trichlorobiphenyls	25.6	л	ig/cart	10.0		1
Tetrachlorobiphenyls	92.4	ก	ng/cart	10.0		1
Pentachlorobiphenyls	117	n	ng/cart	10.0		1
Hexachlorobiphenyls	60.0	n	ng/cart	10.0		1
Heptachlorobiphenyls	27.4	n	ng/cart	10.0		1
Octachlorobiphenyls	ND	n	ng/cart	10.0		1
Nonachlorobiphenyis	ND	n	ng/cart	10.0		1
Decachlorobiphenyl	ND	n	g/cart	10.0		1
Total Homologs	322	n	g/cart	10.0		1
Surrogate	% Recover	y Qualifie	er,	Acceptance Criteria		

103

99

Project Name: Project Number: 19374

19374

Lab Number:

L1417001

Report Date:

08/04/14

SAMPLE RESULTS

Lab ID:

L1417001-02

Client ID:

154901

Sample Location:

Not Specified

Matrix:

Air Media

Analytical Method:

Analytical Date:

105,8270D-SIM/NOAA-M - 08/01/14 02:45

Analyst:

 CM

Date Collected:

Date Received:

07/30/14

Field Prep:

Not Specified

Extraction Method:

EPA 3540C

Extraction Date:

Parameter	Result	Qualifler	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM	(LowVol) - Mansfield La	b				
Monochlorobiphenyls	NĐ		ng/cart	10.0		1
Dichlorobiphenyls	ND		ng/cart	10.0		. 1
Trichlorobiphenyls	ND		ng/cart	10.0		1
Tetrachlorobiphenyls	15.0		ng/cart	10.0		1
Pentachlorobiphenyls	ND		ng/cart	10.0		1
Hexachlorobiphenyls	ND		ng/cart	10.0		1
Heptachlorobiphenyls	ND		ng/cart	10.0		1
Octachlorobiphenyls	ND		ng/cart	10.0	14-76	1
Nonachlorobiphenyls	ND		ng/cart	10.0		1
Decachiorobiphenyl	ND		ng/cart	10.0		1
Total Homologs	15.0		ng/cart	10.0		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Cl3-BZ#19-C13	102		50-125	
CI8-BZ#202-C13	95		50-125	



Lab Number:

L1417001

Report Date:

08/04/14

SAMPLE RESULTS

Lab ID:

L1417001-03

Client ID:

154902

19374

19374

Sample Location:

Not Specified

Matrix:

Air Media

Analytical Method:

Project Name:

Project Number:

105,8270D-SIM/NOAA-M

Analytical Date:

08/01/14 03:59

Analyst:

CM

Date Collected:

Date Collected.

Date Received:

07/30/14

Field Prep:

Not Specified

Extraction Method:

EPA 3540C

Extraction Date:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (Lo	owVol) - Mansfield Lab)				
Monochlorobiphenyls	ND		ng/cart	10.0		1
Dichlorobiphenyls	ND		ng/cart	10.0		1
Trichlorobiphenyls	18,9		ng/cart	10.0		1
Tetrachlorobiphenyls	31.5		ng/cart	10,0	·	1
Pentachlorobiphenyls	17.5	•	ng/cart	10.0		 1
Hexachlorobiphenyls	12.5		ng/cart	10.0	**	1
Heptachlorobiphenyls	ND		ng/cart	10,0	***	1
Octachlorobiphenyls	ND		ng/cart	10.0		1
Nonachlorobiphenyls	ND		ng/cart	10.0		
Decachlorobiphenyl	ND	• •	ng/cart	10.0		1
Total Homologs	80.4		ng/cart	10.0		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Cl3-BZ#19-C13	96		50-125	•
Cl8-BZ#202-C13	93		50-125	

Lab N

Lab Number:

L1417001

Report Date:

08/04/14

SAMPLE RESULTS

Lab ID:

L1417001-04

Client ID:

154903

Sample Location:

Not Specified

Matrix:

Air Media

Analytical Method:

105,8270D-SIM/NOAA-M

Analytical Date:

Project Name:

Project Number:

08/01/14 05:12

Analyst:

CM

19374

19374

Date Collected:

Date Received:

07/30/14

Field Prep:

Not Specified

Extraction Method:

EPA 3540C

Extraction Date:

Parameter	Result ·	Qualifier	Units _.	RL	MDL	Dilution Factor	
PCB Homologs by GC/MS-SIM	(LowVol) - Mansfield Lal)					100 - 100 -
Молоchlorobiphenyls	ND		ng/cart	10.0		1	
Dichlorobiphenyls	ND		ng/cart	10.0		1	
Trichlorobiphenyls	ND		ng/cart	10.0		1	
Tetrachlorobiphenyls	· ND	•	ng/cart	10.0		1	
Pentachlorobiphenyls	ND		ng/cart	10.0		1	
Hexachlorobiphenyis	ND ND		ng/cart	10.0		1	
Heptachlorobiphenyls	ND		ng/cart	10.0		1	
Octachlorobiphenyls	ND		ng/cart	10.0		1	
Nonachlorobiphenyls	ND		ng/cart	10.0		1	
Decachlorobiphenyl	ND		ng/cart	10,0		1	
Total Homologs	ND		ng/cart	10.0		1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Cl3-BZ#19-C13	103		- 50-125	
CI8-BZ#202-C13	97		50-125	

Lab Number:

L1417001

Report Date:

08/04/14

SAMPLE RESULTS

Lab ID:

L1417001-05

Client ID:

154904

19374

19374

Sample Location:

Not Specified

Matrix:

Air Media

Analytical Method:

Project Name:

Project Number:

105,8270D-SIM/NOAA-M

Analytical Date:

08/01/14 06:26

Analyst:

CM

Date Collected:

Date Received:

07/30/14

Field Prep:

Not Specified EPA 3540C

Extraction Method:

Extraction Date:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (L	.owVol) - Mansfield La	b				Sinction 1 detail
Monochiorobiphenyls	ND		ng/cart	10.0		a aram magama magam sasagasa ya j 1
Dichlorobiphenyls	ND		ng/cart	10.0		í
Trichlorobiphenyls	ND		ng/cart	10.0		1
Tetrachlorobiphenyls	ND		ng/cart	10.0		
Pentachlorobiphenyls	ND	***	ng/cart	10.0	···· · · · · · · · · · · · · · · · · ·	' 1
Hexachlorobiphenyls	ND		ng/cart	10,0		1
Heptachlorobiphenyls	NĐ		ng/cart	10.0		1
Octachlorobiphenyls	ND		ng/cart	10.0		1
Nonachlorobiphenyls	ND		ng/cart	10.0		1
Decachlorobiphenyl	ND		ng/cart	10.0		
Fotal Homologs	ND		ng/cart	10.0		1
Surronato	9/ Pana		A	cceptance		

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Cl3-BZ#19-C13	100		50-125	
CI8-BZ#202-C13	104		50-125	

Project Name:

19374

Lab Number:

L1417001

Project Number:

19374

Report Date:

08/04/14

SAMPLE RESULTS

Lab ID:

L1417001-06

Client ID:

154905

Sample Location:

Not Specified

Matrix:

Air Media

Analytical Method:

105,8270D-SIM/NOAA-M

Analytical Date:

08/01/14 07:40

Analyst:

СМ

Date Collected:

Date Received:

07/30/14

Field Prep:

Not Specified

Extraction Method:

EPA 3540C

Extraction Date:

Parameter	Result	Qualifier	Units	RL ·	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM	(LowVol) - Mansfield La	b				
Monochlorobiphenyls	ND		ng/cart	10.0		1
Dichlorobiphenyls	ND		ng/cart	10.0		1
Trichlorobiphenyls	ND		ng/cart	10.0		1
Tetrachlorobiphenyls	ND		ng/cart	10.0		1
Pentachlorobiphenyls	ND		ng/cart	10.0		1
Hexachiorobiphenyls	ND		ng/cart	10,0		1
Heptachlorobiphenyls	ND		ng/cart	10.0		1
Octachlorobiphenyls	ND		ng/cart	10.0		1
Nonachlorobiphenyls	ND		ng/cart	10.0		1
Decachlorobiphenyl	ND		ng/cart	10.0	•••	1.
Total Homologs	ND		ng/cart	10.0		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
Cl3-BZ#19-C13	106	•	50-125	
CI8-BZ#202-C13	100		50-125	



Lab Number:

L1417001

Report Date:

08/04/14

SAMPLE RESULTS

Lab ID:

L1417001-07

Client ID:

154907

Sample Location:

Not Specified

Matrix:

Air Media

Analytical Method:

Project Name:

Project Number:

105,8270D-SIM/NOAA-M

Analytical Date:

08/01/14 08:53

Analyst:

CM

19374

19374

Date Collected:

Date Received:

07/30/14

Field Prep:

Not Specified

Extraction Method:

EPA 3540C

Extraction Date:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (Low	Vol) - Mansfield La	b				
Monochlorobiphenyls	ND		ng/cart	10.0		1
Dichlorobiphenyls	ND		ng/cart	10.0		1
Trichlorobiphenyls	, ND		ng/cart	10.0	**	<u></u> 1
Tetrachlorobiphenyls	ND		ng/cart	10.0		1
Pentachlorobiphenyls	ND		ng/cart	10.0		1
Hexachlorobiphenyls	ND	•	ng/cart	10,0		1
Heptachlorobiphenyls	ND		ng/cart	10.0		1
Octachlorobiphenyls	ND		ng/cart	10.0		1
Nonachlorobiphenyls	ND		ng/cart	10.0		1
Decachlorobiphenyl	ND	•	ng/cart	10.0		` 1
Total Homologs	ND		ng/cart	10.0		1

Surrogate	% Recovery	Qualifier	Acceptance Qualifier Criteria			
Cl3-BZ#19-C13	106	·-	50-125			
Cl8-BZ#202-C13	103		50-125			

Project Name:

19374

Lab Number: Report Date:

L1417001

Project Number:

19374

08/04/14

Lab ID:

SAMPLE RESULTS

Client ID:

L1417001-08

Sample Location:

154908

Matrix:

Not Specified

Analytical Method:

Air Media

105,8270D-SIM/NOAA-M

Analytical Date:

08/01/14 10:07

Analyst:

CM

Date Collected:

Date Received:

07/30/14

Field Prep:

Not Specified

Extraction Method:

EPA 3540C

Extraction Date:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM	(LowVol) - Mansfield La	b				
Monochlorobiphenyls	ND		ng/cart	10.0		1
Dichlorobiphenyls	ND		ng/cart	10.0		1
Trichlorobiphenyls	ND		ng/cart	10.0		1
Tetrachlorobiphenyls	ND		ng/cart	10.0		1 ·
Pentachlorobiphenyls	ND		ng/cart	10.0		1
Hexachlorobiphenyls	ND		ng/cart	10.0		1
Heptachlorobiphenyls	ND		ng/cart	10.0	***	1
Octachlorobiphenyls	ND		ng/cart	10.0		1
Nonachlorobiphenyls	ND		ng/cart	10.0		1
Decachlorobiphenyl	ND		ng/cart	10.0		1
Total Homologs	ND		ng/cart	10.0		1

Surrogate	% Recovery	Qualifier	Acceptance ualifier Criteria		
Cl3-BZ#19-C13	106		50-125		
CI8-BZ#202-C13	103		50-125		



Project Name:

19374

Project Number:

19374

Lab Number:

L1417001

Report Date:

08/04/14

Method Blank Analysis Batch Quality Control

Analytical Method:

105,8270D-SIM/NOAA-M

Analytical Date:

07/31/14 15:52

Analyst:

CM

Extraction Method: EPA 3540C

Extraction Date:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Homologs by GC/MS-S	SIM (LowVol) - Ma	nsfield Lab	for sample	(s): 01-08	Batch: WG709972-1
Monochlorobiphenyls	ND		ng/cart	10.0	
Dichlorobiphenyls	ND		ng/cart	10.0	4.4
Trichlorobiphenyls	ND		ng/cart	10.0	~ a
Tetrachlorobiphenyls	ND		ng/cart	10.0	
Pentachlorobiphenyls	ND		ng/cart	10.0	
Hexachlorobiphenyls	ND		ng/cart	10.0	
Heptachlorobiphenyls	ND	•	ng/cart	10.0	
Octachlorobiphenyls	ND		ng/cart	10.0	
Nonachlorobiphenyls	ND		ng/cart	10.0	en e
Decachlorobiphenyl	ND		ng/cart	10.0	
Total Homologs	ND		ng/cart	10.0	**************************************

		,	Acceptance				
Surrogate	%Recovery	Qualifier	Criteria				
Cl3-BZ#19-C13	102		50-125				
CI8-BZ#202-C13	98		50-125				



Project Name:

19374

Project Number: 19374

Quality Control

Lab Number:

Report Date:

L1417001 08/04/14

rameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
B Homologs by GC/MS-SIM (I	LowVol) - Mansfield Lab. Asso	ociated san	nple(s): 01-08 E	Batch: WG	709972-2			
Cl1-BZ#1	126		-		40-140	-		30
CL1-BZ#3	124		*		40-140	•		30
Ci2-BZ#4/#10	154	Q	-		40-140	-	•	30
Cl2-BZ#8	127		-		40-140	-		30
Cl3-BZ#19	122		, *		40-140	-		30
Cl3-BZ#18	115	,	-		40-140	-		30
Cl2-BZ#15	109		-		40-140	-		. 30
Cl4-BZ#54 _,	124		-		40-140	-		30
Cl3-BZ#29	113		-		40-140	-		30
Cl4-BZ#50	112		-		40-140	-		30
Cl3-BZ#-31	123		-		40-140	-		30
Cl3-BZ#28	113		-		40-140	-		30
Cl4-BZ#45	129		-		40-140	-		30
CI4-BZ#52	114		• • • • • • • • • • • • • • • • • • •		40-140	-		30
Cl4-BZ#49	119		-		40-140	-		30
CI5-BZ#104	132		-		40-140	-		30
Cl4-BZ#47	111		- -		40-140	-		30
Cl4-BZ#44	115		-		40-140	-		30
Cl3-BZ#37	69		-		40-140	-		30
CI5-BZ#121/#95/#88	94		-		40-140	-		30
Ci4-BZ#74	104		<u>-</u>		40-140	-		30



Project Name:

19374

Project Number: 19374

Lab Number:

L1417001

Report Date:

arameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
CB Homologs by GC/MS-SIM (L	₋owVol) - Mansfield Lab∷Ass	ociated sam	ple(s): 01-08 E	Batch: WG	709972-2			
Cl6-BZ#155	111		<u>:</u>		40-140	her	and the second s	· 30
Cl4-BZ#70	104		-		40-140	·		30
Cl4-BZ#66	115		- · · ·	•	40-140		• •	30
CI5-BZ#101/#90	108		*		40-140	•		30
C!4-BZ#56	108		-		40-140			30
CI5-BZ#99	108		- -		40-140			30
CI5-BZ#87/#111	90	•	-		40-140	-		30
Cl6-BZ#154	107		-		40-140	 -		30
CI5-BZ#110	112		•		40-140	_		30
Cl4-BZ#81	102	٠	······································		40-140	-		30
Cl6-BZ#151	112		-		40-140	-		30
Cl6-BZ#147/#149	122		-		40-140	-		30
Cl4-BZ#77	117		-· - · · · · · · · · · · · · · · · · ·		40-140	- · · · · · · · ·		30
Cl5-BZ#107/#123	130		- · · · · · · · · · · · · · · · · · · ·		40-140			30
CI7-BZ#188	106		- -		40-140	- · · · · · · · · · · · · · · · · · · ·		30
CI5-BZ#118	103				40-140	_		30
Ci6-BZ#146	100		- · · · · · · · · · · · · · · · · · · ·		40-140			30
CI5-BZ#114	110	•	-		40-140			30
Cl6-BZ#153	125		· · · · · · · · · · · · · · · · · · ·		40-140			30
CI5-BZ#105	84	•	 -		40-140	•		30
Ci6-BZ#138	101		· • · · · · · · · · · · · · · · · · · ·		40-140	-		30



Project Name:

19374

Project Number: 19374 Lab Number:

L1417001

Report Date:

arameter	LCS %Recovery Qu	LCSD al %Recovery	Qual	%Recovery Limits	RPD		RPD Limits
CB Homologs by GC/MS-SIM (Le	owVol) - Mansfield Lab Associat	ed sample(s): 01-08 E	Batch: WG7	709972-2			
Cl6-BZ#129/#158	129	-		40-140	-		30
CI7-BZ#187	114	-		40-140	-		30
CI7-BZ#183	114	-		40-140	***	•	30
Cl5-BZ#126	70			40-140	*		30
CI7-BZ#174	115	-		40-140	-	•	30
Ci6-BZ#128	110	-		40-140	-		30
CI6-BZ#167	4128	•		40-140	-		30
CI8-BZ#202	131	-		40-140			30
CI7-BZ#177	106	-		40-140			30
CI8-BZ#204/#200-CAL	112	-		40-140	-		30
CI6-BZ#156	106			40-140	-		30
Cl6-BZ#157	110	•		40-140	-		30
CI7-BZ#180	104	-		40-140	-		30
Cl8-BZ#201	110	· · · · · · · · · · · · · · · · · · ·		40-140	-		30
CI7-BZ#170	110	-		40-140	٠,		30
CI6-BZ#169	89	- · · · · · · · · · · · · · · · · · · ·		40-140	-		30
CI9-BZ#208	107			40-140	-		30
CI7-BZ#189	106	-		40-140	-		30
CI8-BZ#195	100	- .		40-140	··· ·· ··· ··· ··· ··· ··· ··· ··· ···		30
Cl8-BZ#194	98	-	,	40-140	· -		30
CI8-BZ#205	98	-		40-140	-		30



Project Name:

19374

Project Number:

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Lab Number:

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Report Date:

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits	
PCB Homologs by GC/MS-SIM	M (LowVol) - Mansfield Lab Asso	ciated sar	mple(s): 01-08 B	atch: WG	709972-2			
Cl9-BZ#206	95		•		40-140	-	30	te Teese (This leaf) is the affiliati
Ci10-BZ#209	104		- -		40-140	· ·	30	

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	
CI3-BZ#19-C13	108				50-125	
Cl8-BZ#202-C13	105				50-125	

Project Name: 19374 Project Number: 19374 Lab Number: L1417001

Report Date: 08/04/14

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

NA

Reagent H2O Preserved Vials Frozen on:

Cooler Information Custody Seal

Cooler

Α` Absent

Container Information							
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1417001-01A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)
L1417001-02A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)
L1417001-03A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)
L1417001-04A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)
L1417001-05A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)
L1417001-06A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)
L1417001-07A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)
L1417001-08A	PUF Air Cartridge (PCB) - Low	Α	N/A	2.9	Υ	Absent	A2-PCBHOMS-8270SIML(7)

Project Name:

19374

Project Number:

19374

Lab Number:

L1417001

Report Date:

08/04/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes
or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes
or a material containing known and verified amounts of analytes.

MDL

- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS
 - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

SRM

 The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

1

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations
 of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated

Report Format: Data Usability Report

Project Name:

Project Number:

19374

Lab Number:

L1417001

19374

Report Date:

08/04/14

Data Qualifiers

- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. H
- The lower value for the two columns has been reported due to obvious interference.
- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. M
- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where NJthe identification is based on a mass spectral library search.
- P - The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Q Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R - Analytical results are from sample re-analysis.
- RE - Analytical results are from sample re-extraction.
- S - Analytical results are from modified screening analysis.
- Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs). J
- ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Project Name:

19374

Project Number:

19374

Lab Number:

L1417001

Report Date:

08/04/14

REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997 in conjunction with NOAA Technical Memorandum NMFS-NWFSC-59: Extraction, Cleanup and GC/MS Analysis of Sediments and Tissues for Organic Contaminants, March 2004 and the Determination of Pesticides and PCBs in Water and Oil/Sediment by GC/MS: Method 680, EPA 01A0005295, November 1985.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran,

1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, lodomethane (methyl iodide), Methyl methacrylate,

Azobenzene.

EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene,

Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; EPA 200.7: Ba,Be,Ca,Cd,Cr,Cu,Na; EPA 245.1: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C,

SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4.

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,

Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Environmental Health & Engineering, Inc.

15-10 60

CHAIN OF CUSTODY FORM

Serial_No:080414204817 00 \

FROM: Environmental Health and Engineering, Inc.

In all correspon		Please send invoices to ATTI Please send reports to ATTI his matter, please refer to EH&E Project #	ΓΝ: Accounts Payable N: Data Coordinator
SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER TIME TO ALL MAIL
154891	AIR	PCB Homolog Analysis	OTHER:Time/Date/Vol.
154 898		1 CD (Wholog / maysis	1314.96
154899			
154900			1327.6
154901			1319 4
154902			12921
154903			12727
154904			1335.7
154905			1340.9
154906	Y		1265.9
154907			0
154908	V	V	0
Special instruc	☐ Standard ☐ Fax result ☐ RETURN SCAdditional	turn around time	<u> </u>
Relinquished by	made	of Environmental Health & Engineering, Inc.	Date: 7/29/14 1/160
Received by:	Widely	of (company name) Alohen	Date: 7/30/4 11:00
Relinquished by	:	of (company name)	Date:
Received by:		of (company name)	
Relinquished by	-	of (company name)	Date:
Received by: Lab Data		of (company name)	Date:
Received by:		of Environmental Health & Engineering, Inc.	Date:
			Page of

Serial_No:0804142**0:31/** 00 \ CHAIN OF CUSTODY FORM Environmental Health & Engineering, Inc. FROM: Environmental Health and Engineering, Inc. 117 Fourth Avenue Needham, MA 02494-2725 Alpha Analytical Please send invoices to ATTN: Accounts Payable Please send reports to ATTN: Data Coordinator In all correspondence regarding this matter, please refer to EH&E Project # ___ The cost of this analysis will be covered by EH&E Purchase Order # _ For EH & E Data Coordinator - URGENT DATA ANALYTICAL METHOD/NUMBER OTHER:Time/Date/Vol. SAMPLE TYPE **SAMPLE ID** PCB Homolog Mother Will call 7/30 min 69 Special instructions: ☐ Standard turn around time ☐ Rush by date/time ☐ Fax results 781-247-4305 Electronic transfer - datacoordinator@eheinc.com □ RETURN SAMPLES

Madditional report recipient <u>thineqishi@eneinc.rom</u> Each signatory please return one copy of this form to the above address 2 of Environmental Health & Engineering, Inc. Relinquished by: of (company name) <u>Α\ ე\(</u>(Λ Received by:_ of (company name) _____ Date: _____ Relinquished by: _Date: _____ Received by:_ _of (company name) __ ___of (company name) _____ Relinquished by: Date: ____of (company name) ___ Received by: ___ Lab Data of Environmental Health & Engineering, Inc. Date: __ Received by: ____ Page ___ of _

APPENDIX D WIPE SAMPLE LABORATORY REPORT



ANALYTICAL REPORT

Lab Number:

L1417106

Client:

Environmental Health & Engineering Inc.

117 Fourth Ave

Needham, MA 02494

ATTN:

Taeko Minegishi

Phone:

(781) 247-4300

Project Name:

Not Specified

Project Number:

19374

Report Date:

08/07/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:

Not Specified

Project Number:

19374

Lab Number:

L1417106

Report Date:

08/07/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1417106-01	154909	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-02	154911	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-03	154912	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-04	154913	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-05	154914	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-06	154915	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-07	154916	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-08	154917	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-09	154918	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-10	154919	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-11	154920	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-12	154921	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-13	154922	WIPE	Not Specified	07/30/14 00:00	07/31/14
L1417106-14	154910	WIPE	Not Specified	07/30/14 00:00	07/31/14
	· · · · · · · · · · · · · · · · · · ·				

Project Name:

Not Specified

Project Number:

19374

Lab Number:

L1417106

Report Date:

08/07/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.



Project Name:

Not Specified

Project Number:

19374

Lab Number:

L1417106

Report Date:

08/07/14

Case Narrative (continued)

PCBs

The WG710449-1 Method Blank, associated with L1417106-01 through -14, has a concentration above the reporting limit for aroclor 1254. Since the samples were non-detect for this target analyte, no further actions were taken. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

609 Stew Down Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 08/07/14

ORGANICS



PCBS



Project Name: Not Specified

Project Number: 19374

Lab Number:

L1417106

Report Date:

08/07/14

SAMPLE RESULTS

Lab ID:

L1417106-01

Client ID: Sample Location: 154909 Not Specified

Matrix:

Wipe

Analytical Method:

1,8082A

Analytical Date:

08/04/14 12:02

Analyst:

JT

Date Collected:
Date Received:

07/30/14 00:00

Date Received:

07/31/14

Field Prep: Extraction Method:

Not Specified EPA 3540C

Extraction Date:

08/01/14 01:22

Cleanup Method: Cleanup Date: EPA 3665A 08/02/14

Cleanup Method:

EPA 3660B

Cleanup Date:

08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroctor 1016	ND		ug Abs	0.500		1	Α
Aroclor 1221	ND		ug Abs	0.500		1	Α
Aroclor 1232	, ND		ug Abs	0.500		1	Α
Aroclor 1242	ND		ug Abs	0.500		1	Α
Aroclor 1248	ND		ug Abs	0.500		1	Α
Aroclor 1254	ND		ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND	•	ug Abs	0.500	***	1	· А
Aroclor 1268	ND		ug Abs	0.500		1	Α
PCBs, Total	ND		ug Abs	0.500		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	Α
Decachlorobiphenyl	55		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	53		30-150	В
Decachlorobiphenyl	68	-	30-150	В

Lab Number:

L1417106

Report Date:

08/07/14

Lab ID:

19374

SAMPLE RESULTS

L1417106-02

Not Specified

Client ID:

154911

Sample Location: Matrix:

Not Specified

Wipe

Analytical Method:

Project Name:

Project Number:

1,8082A

Analytical Date:

08/04/14 12:15

Analyst:

JT

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C 08/01/14 01:22

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14 EPA 3660B

Cleanup Date:

08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							Odianin
Aroclor 1016	ND		ug Abs	0.500		1	A
Aroclor 1221	ND		ug Abs	0.500	***	1	A
Aroclor 1232	ND ·		ug Abs	0.500		1	
Aroclor 1242	ND		ug Abs	0.500		1	Α
Aroclor 1248	ND	***	ug Abs	0.500		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Α
Aroclor 1254	ND		ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500		1	Α
PCBs, Total	ND	••	ug Abs	0.500		 1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	Α
Decachlorobiphenyl	52		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	В
Decachlorobiphenyl	67		30-150	В

L1417106

07/30/14 00:00

07/31/14

Not Specified Lab Number:

Project Number: 19374 Report Date: 08/07/14

SAMPLE RESULTS

Project Name:

Lab ID: L1417106-03 Date Collected:
Client ID: 154912 Date Received:
Sample Location: Not Specified Field Prep:

Sample Location:Not SpecifiedField Prep:Not SpecifiedMatrix:WipeExtraction Method:EPA 3540CAnalytical Method:1,8082AExtraction Date:08/01/14 01:22Analytical Date:08/04/14 12:28Cleanup Method:EPA 3665A

Analyst: JT Cleanup Date: 08/02/14
Cleanup Method: EPA 3660B
Cleanup Date: 08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Araclor 1016	ND		ug Abs	0.500		1	Α
Aroclor 1221	ND		ug Abs	0.500		1	Α
Aroclor 1232	ND		ug Abs	0.500		1 .	Α
Aroclor 1242	NĐ		ug Abs	0.500		1	Α
Aroclor 1248	ND		ug Abs	0,500	_	1	Α
Aroclor 1254	ND	•	ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		. 1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	NĐ		ug Abs	0.500	÷~	1	Α
PCBs, Total	ND		ug Abs	0.500		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	Α
Decachlorobiphenyl	52		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	60		30-150	В
Decachlorobiphenyl	64		30-150	В

Lab Number:

L1417106

Report Date:

08/07/14

19374

SAMPLE RESULTS

Lab ID:

L1417106-04

Not Specified

Client ID:

154913

Sample Location:

Project Name:

Project Number:

Not Specified

Matrix: Analytical Method:

Wipe

Analytical Date:

1,8082A

08/04/14 12:42

Analyst:

JΤ

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep: Extraction Method:

Not Specified EPA 3540C

Extraction Date:

08/01/14 01:22

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14 EPA 3660B

Cleanup Date:

08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							E COLUMN
Aroclor 1016	ND		ug Abs	0.500	' ''' '''	1	Α
Aroclor 1221	ND		ug Abs	0.500		1	A
Aroclor 1232	ND		ug Abs	0.500		1	Α
Aroclor 1242	ND		ug Abs	0,500		1	Α
Aroclor 1248	ND		ug Abs	0.500			Α
Aroclor 1254	ND		ug Abs	0.500		1	Α
Aroctor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	A
Aroclor 1268	ND		ug Abs	0.500		1	Α
PCBs, Total	ND		ug Abs	0.500		1	Δ

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	Α
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	В
Decachlorobiphenyl	64		30-150	В

Date Collected:

Cleanup Date:

L1417106

07/30/14 00:00

08/02/14

1

1

Α

Not Specified Lab Number:

Project Number: 19374

Report Date: 08/07/14 **SAMPLE RESULTS**

Lab ID: L1417106-05

Project Name:

Client ID: 154914 Date Received: 07/31/14 Sample Location: Not Specified Field Prep: Not Specified

Matrix: Wipe Extraction Method: **EPA 3540C** Analytical Method: 1,8082A **Extraction Date:** 08/01/14 01:22

Analytical Date: 08/04/14 12:55 Cleanup Method: EPA 3665A Analyst: JΤ Cleanup Date: 08/02/14 Cleanup Method: **EPA 3660B**

Parameter Qualifier RL MDL Result Units **Dilution Factor** Column PCB by GC - Westborough Lab Aroclor 1016 ND ug Abs 0.500 1 Α Aroclor 1221 ND ug Abs 0.500 1 Α Aroclor 1232 ND ug Abs 0.500 1 Aroclor 1242 ND ug Abs 0.500 1 Α Aroclor 1248 ND ug Abs 0.500 1 Α Aroclor 1254 ND ug Abs 0.500 1 Α Aroclor 1260 ND ug Abs 0.500 1 Α Aroclor 1262 ND ug Abs 0.500 1

ug Abs

ug Abs

0.500

0.500

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	Α
Decachlorobiphenyl	78		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	. 66		30-150	В
Decachlorobiphenyl	82		30-150	В

ND

ND

Aroclor 1268

PCBs, Total

Lab Number:

L1417106

lumber: 19374

Project Name: Project Number:

Report Date:

08/07/14

Lab ID:

L1417106-06

Client ID:

154915

Not Specified

Sample Location: Matrix:

Not Specified Wipe

Analytical Method:

1,8082A

Analytical Date:

08/04/14 13:08

Analyst:

JT

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified EPA 3540C

Extraction Date:

Extraction Method:

08/01/14 01:22

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14

Cleanup Date:

EPA 3660B 08/02/14 ·

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500		1	A
Aroclor 1221	ND		ug Abs	0.500		. 1	Α
Aroclor 1232	ND		ug Abs	0.500	***	1	Α
Aroclor 1242	ND	,	ug Abs	0.500		1	Α
Aroclor 1248	ND		ug Abs	0.500		1	Α
Arocler 1254	ND		ug Abs	0.500		. 1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500		1	Α
PCBs, Total	ND		ug Abs	0.500	··· .	1	Α

SAMPLE RESULTS

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	Α
Decachlorobiphenyl	61		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	65		30-150	В
Decachlorobiphenyl	74		30-150	В

L1417106

08/07/14

07/31/14

07/30/14 00:00

Lab Number:

Not Specified

Project Number:

19374 Report Date: **SAMPLE RESULTS**

Project Name:

Lab ID: L1417106-07 Date Collected: Client ID: 154916 Date Received: Sample Location: Not Specified Field Prep: Matrix: Wipe

Not Specified Extraction Method: EPA 3540C Analytical Method: 1,8082A Extraction Date: 08/01/14 01:22 Analytical Date: 08/04/14 13:22 Cleanup Method: EPA 3665A

Analyst: JΤ Cleanup Date: 08/02/14 Cleanup Method: EPA 3660B Cleanup Date: 08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							100 (100 (100 (100 (100 (100 (100 (100
Aroclor 1016	ND		ug Abs	0.500		1	Α
Aroclor 1221	ND		ug Abs	0.500		1	Α
Aroclor 1232	ND		ug Abs	0.500		1	Α
Aroclor 1242	ND		ug Abs	0.500		1	Α
Aroclor 1248	ND		ug Abs	0.500		1	Α.
Aroclor 1254	ND		ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500		1	Α
PCBs, Total	ND		ug Abs	0.500		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	62		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	67		30-150	В
Decachlorobiphenyl	75		30-150	В

Project Name: Not Specified

Project Number:

19374

L1417106

Lab Number: Report Date:

08/07/14

Lab ID:

L1417106-08

Client ID:

154917

Sample Location:

Not Specified

Matrix:

Wipe

Analytical Method:

1,8082A

Analytical Date: Analyst:

08/04/14 13:35 JT

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C 08/01/14 01:22

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14

Cleanup Date:

EPA 3660B 08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough La	ab						
Aroclor 1016	ND		ug Abs	0.500		1	Α
Aroclor 1221	ND		ug Abs	0.500		1	Α
Aroclor 1232	ND		ug Abs	0.500		1	Α
Aroclor 1242	ND		ug Abs	0.500		1	Α
Aroclor 1248	ND		ug Abs	0.500		1	Α
Aroclor 1254	ND		ug Abs	0.500	***	1	Α
Aroclor 1260	ND		ug Abs	0.500	~~	1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500	**	1	Α
PCBs, Total	ND	•	ug Abs	0.500	***	1	Α

SAMPLE RESULTS

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	Α
Decachlorobiphenyl	62		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	59		30-150	В
Decachlorobiphenyl	75		30-150	В



Project Name: Not Specified

Project Number: 19374

SAMPLE RESULTS

L1417106

Report Date: 08/07/14

Lab ID:

Client ID:

L1417106-09

Sample Location:

154918 Not Specified

Matrix:

Wipe

Analytical Method: Analytical Date:

1,8082A 08/04/14 13:48

Analyst:

JT

Date Collected:

Lab Number:

07/30/14 00:00 07/31/14

Date Received: Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C 08/01/14 01:22

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14

Cleanup Date:

EPA 3660B 08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	.**	1	Α
Aroclor 1221	ND		ug Abs	0.500		1	Α
Aroclor 1232	ND		ug Abs	0.500		1	Α
Aroclor 1242	ND		ug Abs	0,500		1	Α
Arodor 1248	ND		ug Abs	0.500		1	Α
Aroclor 1254	ND		ug Abs	0.500		1	Α
Arodor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500		1	Α
PCBs, Total	ND		ug Abs	0.500		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	43		30-150	Α
Decachlorobiphenyl	43		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	44		30-150	В
Decachlorobiphenyl	51		30-150	В

Lab Number:

L1417106

Report Date:

08/07/14

19374

SAMPLE RESULTS

Lab ID:

L1417106-10 Client ID:

Sample Location:

Project Name:

Project Number:

154919 Not Specified

Not Specified

Matrix: Analytical Method:

Wipe

Analytical Date:

1,8082A 08/04/14 14:02

Analyst:

JΤ

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep: Extraction Method: Not Specified EPA 3540C

Extraction Date:

08/01/14 01:22

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14 EPA 3660B

Cleanup Date:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500		1	Α
Aroclor 1221	ND	•	ug Abs	0.500		1	Α
Aroclor 1232	ND		ug Abs	0.500	**	1	A
Aroclor 1242	ND		ug Abs	0.500			Α
Aroclor 1248	ND		ug Abs	0.500		1	Α
Aroclor 1254	ND		ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500		. 1	Α
PCBs, Total	ND		ug Abs	0.500		1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	Α
Decachlorobiphenyl	73		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	63		30-150	В
Decachlorobiphenyl	77		30-150	В

Not Specified Lab Number:

Project Name: Report Date: **Project Number:** 19374 08/07/14

SAMPLE RESULTS

Lab ID: L1417106-11 Client ID: 154920

Sample Location: Not Specified

Matrix: Wipe 1,8082A Analytical Method:

Analytical Date: 08/04/14:15

Analyst:

JΤ

Date Collected:

07/30/14 00:00

L1417106

Date Received:

07/31/14

Field Prep: Extraction Method:

Not Specified EPA 3540C

Extraction Date: Cleanup Method: 08/01/14 01:22 EPA 3665A

Cleanup Date: Cleanup Method: Cleanup Date:

08/02/14 EPA 3660B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500		1	Α
Aroclor 1221	ND		ug Abs	0.500		1	Α
Aroclor 1232	ND		ug Abs	0.500		1	Α
Aroclor 1242	ND		ug Abs	0.500		1	Α
Aroclor 1248	ND		ug Abs	0.500		1	Α
Aroclor 1254	ND	,	ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500	***	1	Α
PCBs, Total	ND		ug Abs	0.500	***	1	Α

	Acceptance							
Surrogate	% Recovery	Qualifier	Criteria	Column				
2,4,5,6-Tetrachloro-m-xylene	64		30-150	Α				
Decachlorobiphenyl	61		30-150	Α				
2,4,5,6-Tetrachloro-m-xylene	67		30-150	В				
Decachlorobiphenyl	74		30-150	В				



Lab Number:

L1417106

Report Date:

08/07/14

Lab ID:

19374

SAMPLE RESULTS

L1417106-12

Client ID:

154921

Sample Location:

Project Name:

Project Number:

Not Specified

Not Specified

Matrix:

Wipe

Analytical Method:

1,8082A

Analytical Date:

08/04/14 14:28

Analyst:

JT

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C 08/01/14 01:22

Cleanup Method: Cleanup Date:

EPA 3665A

Cleanup Method:

08/02/14 EPA 3660B

Cleanup Date:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab			Marcon Committee				- Columni,
Aroclor 1016	ND		ug Abs	0.500		1	Α
Aroclor 1221	ND		ug Abs	0.500	•	1	A
Aroclor 1232	ND		ug Abs	0.500	·		Α
Aroclor 1242	ND		ug Abs	0.500		1	Α
Arocior 1248	ND	•	ug Abs	0.500	· .	1	Α
Aroclor 1254	NĐ		ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1	Α
Aroclor 1268	ND		ug Abs	0.500	***	1	Α
PCBs, Total	ND		ug Abs	0.500		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	Α
Decachlorobiphenyl	63		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	64		30-150	В
Decachlorobiphenyl	78		30-150	В

Project Name: Not Specified

Project Number: 19374

SAMPLE RESULTS

Lab Number: L1417106

Report Date:

08/07/14

Lab ID:

I

L1417106-13

Client ID: Sample Location: 154922

Matrix:

Not Specified Wipe

Analytical Method:

1,8082A

Analytical Date:

08/04/14 14:42

Analyst:

JT

Date Collected:

07/30/14 00:00

Date Received:

07/31/14

Field Prep:

Not Specified

Extraction Method: Extraction Date:

EPA 3540C 08/01/14 01:22

Cleanup Method:

08/01/14 01:22 EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14

Cleanup Date:

EPA 3660B 08/02/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
PCB by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	**	1	Α
Aroclor 1221	ND		ug Abs	0.500		1 .	Α
Aroclor 1232	ND		ug Abs	0.500		1	Α
Aroclor 1242	ND		ug Abs	0.500		1	Α
Aroclor 1248	ND		ug Abs	0.500		1	Α
Aroclor 1254	ND		ug Abs	0.500		1	Α
Aroclor 1260	ND		ug Abs	0.500		1	Α
Aroclor 1262	ND		ug Abs	0.500		1 -	Α
Aroclor 1268	ND		ug Abs	0.500		1	Α
PCBs, Total	ND		ug Abs	0,500		1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	. 57		30-150	A
Decachlorobiphenyl	60		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	59		30-150	В
Decachlorobiphenyl	72		30-150	В



Lab Number:

L1417106

Report Date:

08/07/14

Lab ID:

19374

SAMPLE RESULTS

Client ID:

L1417106-14 154910

Not Specified

Sample Location:

Project Name:

Project Number:

Not Specified

Matrix: Analytical Method: Wipe

1,8082A

Analytical Date:

08/04/14 14:55

Analyst:

JT

Date Collected:

07/30/14 00:00

Date Received: Field Prep:

07/31/14 Not Specified EPA 3540C

Extraction Method: Extraction Date: Cleanup Method:

08/01/14 01:22

Cleanup Date: Cleanup Method: EPA 3665A 08/02/14

Cleanup Date:

EPA 3660B 08/02/14

Parameter	Result	Result Qualifier		RL	MDL	Dilution Factor	Column	
PCB by GC - Westborough L	ab							
Aroclor 1016	ND		ug Abs	0.500		1	Α	
Aroclor 1221	ND		ug Abs	0.500	•••	1	Α	
Aroclor 1232	ND		ug Abs	0.500		1	Α	
Aroclor 1242	ND		ug Abs	0.500			Α	
Aroclor 1248	ND		ug Abs	0.500			Α	
Aroclor 1254	ND		ug Abs	0.500	***	1	Α	
Aroclor 1260	ND		ug Abs	0.500		1	Α	
Aroclor 1262	. ND		ug Abs	0.500		1	Α	
Aroclor 1268	ND		ug Abs	0,500			Α	
PCBs, Total	ND		ug Abs	0.500		1	Δ	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	Α
Decachlorobiphenyl	58		30-150	Α
2,4,5,6-Tetrachloro-m-xylene	69		30-150	В
Decachlorobiphenyl	68		30-150	В

Not Specified

Lab Number:

L1417106

Project Number:

19374

Report Date:

08/07/14

Method Blank Analysis Batch Quality Control

Analytical Method: Analytical Date:

1,8082A

08/04/14 15:08

Analyst:

JT

Extraction Method: EPA 3540C

Extraction Date:

08/01/14 01:22

Cleanup Method:

EPA 3665A

Cleanup Date: Cleanup Method: 08/02/14

Cleanup Date:

EPA 3660B

Parameter	Result	Qualifier	Units	RL	MDL	Column
PCB by GC - Westborou	gh Lab for sample(s):	01-14 B	atch: WG	3710449-1		
Aroclor 1016	ND		ug Abs	0.500		Α
Aroclor 1221	ND		ug Abs	0.500		Α
Aroclor 1232	ND		ug Abs	0.500		Α
Arodor 1242	ND		ug Abs	0.500		· A
Aroclor 1248	ND		ug Abs	0.500		Α
Aroclor 1260	ND		ug Abs	0.500		, A
Aroclor 1262	ND		ug Abs	0.500		Α
Aroclor 1268	ND		ug Abs	0.500	***	Α
PCBs, Total	0.765		ug Abs	0.500	****	Α
Aroclor 1254	0.765		ug Abs	0.500		В

*		Acceptance					
Surrogate	%Recovery	Qualifier	Criteria	Column			
2,4,5,6-Tetrachloro-m-xylene	57		30-150	Α			
Decachlorobiphenyl	53		30-150	Α			
2,4,5,6-Tetrachloro-m-xylene	60		30-150	В			
Decachlorobiphenyl	67		30-150	В			



Lab Control Sample Analysis Batch Quality Control

Project Name:

Not Specified

Project Number:

19374

Lab Number:

L1417106

Report Date:

08/07/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
PCB by GC - Westborough	Lab Associated sample(s): 01-14	Batch:	WG710449-2 W0	3710449-3					
Aroclor 1016	66		61		40-140	8		50	A
Aroclor 1260	59		55		40-140	6	: :	50	Α

	LCS	LCSD		Acceptance		
Surrogate	%Recovery Qual		%Recovery Qual		Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		56		30-150	Α
Decachlorobiphenyl	62		57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		58		30-150	В
Decachlorobiphenyl	74		72		30-150	В

Project Name:

Not Specified

Project Number: 19374

Lab Number: L1417106

Report Date: 08/07/14

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on:

NA

Cooler Information Custody Seal

Cooler

Α

Absent

Container Info	rmation						
Container ID	Container Type	Cooler	рН	Temp deg C	Pres	Seal	Analysis(*)
L1417106-01A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-02A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-03A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-04A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-05A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-06A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-07A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-08A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-09A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-10A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-11A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-12A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)
L1417106-13A	Amber 100ml Hexane preserved	Α	N/A	4.4	Y,	Absent	PCB-8082-3540C(14)
L1417106-14A	Amber 100ml Hexane preserved	Α	N/A	4.4	Υ	Absent	PCB-8082-3540C(14)

Not Specified

Project Number:

19374

Lab Number:

L1417106

Report Date:

08/07/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency

Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes
or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes
or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS

- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

 The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

Report Format: Data Usability Report



Not Specified

Lab Number:

L1417106

Project Number: 19374 Report Date:

08/07/14

Data Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference,

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

- NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P - The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R - Analytical results are from sample re-analysis.
- RE - Analytical results are from sample re-extraction.
- \mathbf{S} - Analytical results are from modified screening analysis.
- J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Not Specified

Project Number:

19374

Lab Number:

L1417106

Report Date:

08/07/14

REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, lodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene,

Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; EPA 200.7: Ba,Be,Ca,Cd,Cr,Cu,Na; EPA 245.1: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C,

SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics.

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan I, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Collert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

FROM: Environmental Health and Engineering, Inc.

117 Fourth Avenue

TO: ALP	HA ANALYT	TICAL	Please send invoices to ATTN	Please send invoices to ATTN: Accounts Payable Please send reports to ATTN: Data Coordinator						
,			· ·		ı					
In all correspon	ndence regarding ti	nis matter, please refe	er to EH&E Project # $\underline{/9374}$							
	•		chase Order #							
	ata Coordinator - Ul	I								
SAMPLE ID			TICAL METHOD/NUMBER		ne/Date/Vol.					
154909	WIFE	EPA 8082	PCB	7/301	14 \$					
154911		1			1000m2					
154912					100cm2					
154913										
154914										
154915										
154916										
154917		, 110/1								
154 918					·					
154 919										
154920										
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Special instru	ctions:				· -					
•	Standard	turn around time	☐ Rush by —	☐ Other ——						
		ts 781-247-4305		<u>.</u>	. •					
	☐ RETURN	SAMPLES	Electronic transfer - datacoordi Nineo Shi (a) ENPINC - CO.	nator@eheinc.coi	m ·					
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	A 11 1	/		- <i>I</i>	1.4					
Relinquished b	y flad X	XX	mental Health & Engineering, Inc.	Date: 7/30	117					
Received by: _	-Epville		ny name) <u>Alpha</u>	Date: <u>7/31//</u>	4 9:22					
Relinquished b	y:	of (compa	ny name)	Date:						
Received by: _		of (compar	ny name)	Date:						
			ny name)							
Received by: _ Lab Data		of (compa	ny name)	Date:	- wheeled					
Received by: _		of Environ	mental Health & Engineering, Inc.	Date:						
				Dage of	. '					

APPENDIX E QUALITY ASSURANCE/QUALITY CONTROL PLAN

SITE SPECIFIC CRITERIA

Potential exposure to airborne PCBs shall be controlled to as low as reasonably achievable, and in all cases comply with the public health levels of PCBs in school air provided by the U.S. Environmental Protection Agency (EPA) for elementary school (ages 6 to <12 years; 300 ng/m³; http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/maxconcentrations.pdf). As the current levels in the school are below the EPA guideline, no further air sampling is proposed for this work.

Potential exposure to PCBs in surface dust shall be controlled to as low as reasonably achievable, and in all cases comply with criterion set forth by the EPA of $10 \mu g/100 \text{ cm}^2$ for occupied spaces as well as a more stringent criteria of $1 \mu g/100 \text{ cm}^2$ previously stipulated by the EPA Region 1 PCB Coordinator for similar work.

QUALITY ASSURANCE/QUALITY CONTROL

This section describes the quality assurance objectives, measurement criteria, and performance criteria that were/will be employed for this program. The selected analytical test methods for this project will have laboratory quantification limits that are lower than the established project action limits. A laboratory certification letter indicating compliance with the requirements of this plan will be provided under separate cover.

The ultimate objective of this project is to evaluate PCB concentrations in soil, as specified in this plan. The data collected must be of sound quality to support evaluation of site conditions.

The ability of the data to meet the project quality objectives shall be measured using data quality criteria, which include precision, accuracy, representativeness, comparability, completeness, and sensitivity parameters. Laboratory and field sampling activity documentation will be used to assess these parameters. In addition, only certified laboratories shall be used to ensure proper data handling techniques. The acceptance criteria and frequency of measurement of these parameters are summarized in Table E.1.

Data Quality Indicators	Measurement Performance Criteria	QC Sample and/or Activity Used to Assess Measurement Performance	Frequency
Precision—Overall	±45%	Field duplicates	Minimum: One per group of 20% of samples
Precision—Laboratory	±45%	Matrix spike Matrix spike duplicates	Minimum: One per analysis.
Accuracy/Bias	±45%	Matrix spike Matrix spike duplicates	Minimum: One per group
Accuracy/Bias	Acceptable quality control range based on analytical technique	Laboratory control samples	Double column GC Surrogate compound
Accuracy/Bias— Contamination	No target analytes above laboratory quantification limit with the exception of common field/laboratory contaminants	Equipment blanks Method blanks	Minimum: One per group
Comparability	Not applicable	Comparability check	Double column GC
Data completeness	90% Overall	Data completeness check	One
Sensitivity	±100%	Low calibration standard	Minimum: One

Surface samples will be analyzed using EPA Method 8082 with extraction performed by EPA Method 3540C. Quality assurance and quality control sampling will include one blank, one duplicate sample.

Precision

Precision is the degree of agreement among repeated measurements of the same characteristic under the same or similar conditions. In general, EH&E collects one duplicate sample for every ten samples collected or 20% of the sample size. No less than one duplicate set is collected, regardless of the sample size. The identity of the duplicate sample(s) is not revealed to the analytical laboratory. The target precision among field duplicates is ±45%, indicating good reproducibility. Because of the low possibility of residual PCBs in the collected samples, EH&E believes that a precision of 45% will be an acceptable indicator for reproducibility. Precision levels greater than 45% will not invalidate the sample data set but will be flagged to caution users about the variability within the data.

Accuracy

Accuracy is the extent of agreement between an observed value (sample result) and the accepted or true value of the parameter being measured. All field equipment are calibrated and maintained to minimize variability. EH&E also observes proper handling and packaging techniques to preserve the integrity of the samples. The appropriate laboratory QC program and analytical method determine acceptable recoveries. The laboratory utilizes spiked samples, reference standards, and blanks to assure accuracy. Recoveries outside the acceptable limits will not invalidate the sample data set; however, the data will be flagged to warn of its reliability.

Representativeness

Representativeness is a qualitative term that describes the extent to which a sampling design adequately reflects the environmental conditions of a site. The samples locations were/will be selected to represent the various field conditions and in the locations most likely to be impacted by building related PCBs.

Reasonableness

All data are evaluated for reasonableness based on existing knowledge of the Aroclor mixtures in building environments. Any data that substantially falls outside these expected levels will be further evaluated for accuracy and additional data collection may be required.

Completeness

Completeness is a measure (percentage) of the amount of valid data obtained meeting the data quality objectives. Valid data are data that are soundly founded as evidenced by the data quality indicators. The acceptable completeness percentage for this project is 90%.

APPENDIX F

- 1. Environmental Health & Engineering, Inc.'s (EH&E) indoor environmental quality assessment described in the attached letter 19374, *Pollock Elementary School, Pollock, Louisiana* (hereafter "the Letter"), was performed in accordance with generally accepted practices employed by other consultants undertaking similar studies at the same time and in the same geographical area; and EH&E observed that degree of care and skill generally exercised by such other consultants under similar circumstances and conditions. The observations described in the Letter were made under the conditions stated therein. The conclusions presented in the Letter were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services.
- 2. Observations were made of the site as indicated within the Letter. Where access to portions of the site was unavailable or limited, EH&E renders no opinion as to the condition of that portion of the site.
- 3. The observations and recommendations contained in the Letter are based on limited environmental sampling and visual observation and were arrived at in accordance with generally accepted standards of industrial hygiene practice. The sampling and observations conducted at the site were limited in scope and, therefore, cannot be considered representative of areas not sampled or observed.
- 4. When an outside laboratory conducted sample analyses, EH&E relied upon the data provided and did not conduct an independent evaluation of the reliability of these data.
- 5. The purpose of the Letter was to assess the characteristics of the subject site as stated within the Letter. No specific attempt was made to verify compliance by any party with all federal, state, or local laws and regulations.

Appendix C: Analytical Reports





The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Ross Hartman Strategic Environmental Services 362 Putnam Hill Road Sutton, MA 01590

RE: Pollock Elementary (15-0515)

ESS Laboratory Work Order Number: 1507735

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laboratory Director

REVIEWED

By ESS Laboratory at 1:21 pm, Aug 07, 2015

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507735

SAMPLE RECEIPT

The following samples were received on July 31, 2015 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1507735-01	S-1	Solid	8082A
1507735-02	S-2	Solid	8082A



of Thielsch Engineering, Inc.

y BAL LABORATOR

CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507735

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507735

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint

6010C - ICP

6020A - ICP MS

7010 - Graphite Furnace

7196A - Hexavalent Chromium

7470A - Aqueous Mercury

7471B - Solid Mercury

8011 - EDB/DBCP/TCP

8015D - GRO/DRO

8081B - Pesticides

8082A - PCB

8100M - TPH

8151A - Herbicides

8260B - VOA

8270D - SVOA

8270D SIM - SVOA Low Level

9014 - Cyanide

9038 - Sulfate

9040C - Aqueous pH

9045D - Solid pH (Corrosivity)

9050A - Specific Conductance

9056A - Anions (IC)

9060A - TOC

9095B - Paint Filter

MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion

3020A - Aqueous Graphite Furnace / ICP MS Digestion

3050B - Solid ICP / Graphite Furnace / ICP MS Digestion

3060A - Solid Hexavalent Chromium Digestion

3510C - Separatory Funnel Extraction

3520C - Liquid / Liquid Extraction

3540C - Manual Soxhlet Extraction

3541 - Automated Soxhlet Extraction

3546 - Microwave Extraction

3580A - Waste Dilution

5030B - Aqueous Purge and Trap

5030C - Aqueous Purge and Trap

5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: S-1

Date Sampled: 07/30/15 13:00

Percent Solids: 99 Initial Volume: 19.3 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507735 ESS Laboratory Sample ID: 1507735-01

Sample Matrix: Solid Units: mg/kg dry Analyst: TJ

Prepared: 8/3/15 18:35

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	<u>MDL</u>	Method	Limit	<u>DF</u>	Analy	zed	Sequence	Batch
Aroclor 1016	ND (0.05)		8082A		1	08/05/15			CH50309
Aroclor 1221	ND (0.05)		8082A		1	08/05/15	1:46		CH50309
Aroclor 1232	ND (0.05)		8082A		1	08/05/15	1:46		CH50309
Aroclor 1242	ND (0.05)		8082A		1	08/05/15	1:46		CH50309
Aroclor 1248	ND (0.05)		8082A		1	08/05/15	1:46		CH50309
Aroclor 1254	ND (0.05)		8082A		1	08/05/15	1:46		CH50309
Aroclor 1260	0.9 (0.05)		8082A		1	08/05/15	1:46	•	CH50309
Aroclor 1262	ND (0.05)		8082A		1	08/05/15	1:46		CH50309
Aroclor 1268	ND (0.05)		8082A		1	08/05/15	1:46		CH50309
	%R	ecovery	Qualifier	Limits					
Surrogate: Decachlorobiphenyl		70 %		<i>30-150</i>					
Surrogate: Decachloroblphenyl [2C]		65 %		30-150					
Surrogate: Tetrachloro-m-xylene		88 %		30-150					
Surrogate: Tetrachloro-m-xylene [2C]		105 %		30-150					



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: S-2

Date Sampled: 07/30/15 13:00

Percent Solids: 92 Initial Volume: 19.7 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507735 ESS Laboratory Sample ID: 1507735-02

Sample Matrix: Solid Units: mg/kg dry Analyst: TJ

Prepared: 8/3/15 18:35

8082A Polychlorinated Biphenyls (PCB)

								•
Analyte Aroclor 1016	Results (MRL) ND (0.06)	<u>MDL</u>	Method 8082A	<u>Limit</u>	$\frac{\mathbf{DF}}{1}$	Analyzed 08/05/15 2:0		Batch CH50309
Aroclor 1221	ND (0.06)		8082A		1	08/05/15 2:0		CH50309
Aroclor 1232	ND (0.06)		8082A		1	08/05/15 2:0	5	CH50309
Aroclor 1242	ND (0.06)		8082A		1	08/05/15 2:0	5	CH50309
Aroclor 1248	ND (0.06)		8082A	•	1	08/05/15 2:0	5	CH50309
Aroclor 1254	ND (0.06)		8082A		1	08/05/15 2:0	5	CH50309
Aroclor 1260	0.3 (0.06)		8082A		1	08/05/15 2:0	5	CH50309
Aroclor 1262	ND (0.06)		8082A		1	08/05/15 2:0	5	CH50309
Aroclor 1268	ND (0.06)		8082A		1	08/05/15 2:0	5	CH50309
	%	Recovery	Qualifier	Limits		·		
Surrogate: Decachlorobiphenyl		77 %		<i>30-150</i>				
Surrogate: Decachlorobiphenyl [2C]		77 %	`	30-150				
Surrogate: Tetrachloro-m-xylene		90 %		30-150				
Surrogate: Tetrachloro-m-xylene [2C]		106 %		30-150				



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507735

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	' Qualifier
	80	82A Polyc	hlorinated	Bipheny	yls (PCB					
Batch CH50309 - 3540C										
Blank	***************************************		******	THOU				-1×		"Million"
Aroclor 1016	ND	0.05	mg/kg wet		74-				·	
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							•
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Surrogate: Decachlorobiphenyl	0.0170		mg/kg wet	0.02500		68	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0197		mg/kg wet	0.02500		<i>79</i>	30-150			
Surrogate: Tetrachloro-m-xylene	0.0196	• '	mg/kg wet	0.02500		78	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0255		mg/kg wet	0.02500		102	30-150			
LCS	***	·		 ·	*	~-				
Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		96	40-140	mu.		
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		100	40-140			
Surrogate: Decachlorobiphenyl	0.0193		mg/kg wet	0.02500		77	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0220		mg/kg wet	0.02500		88	30-150			
Surrogate: Tetrachloro-m-xylene	0.0217		mg/kg wet	0.02500		87	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0251		mg/kg wet	0.02500		101	30-150			
-CS Dup			170	7.						
Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		97	40-140	0.9	20	
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		101	40-140	0.9	20	
Surrogate: Decachlorobiphenyl	0.0193		mg/kg wet	0.02500		77	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0218		mg/kg wet	0.02500		87	30-150			
Surrogate: Tetrachloro-m-xylene	0.0218		mg/kg wet	0.02500		87	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0250		mg/kg wet	0.02500		100	30-150			



The Microbiology Division of Thiclsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Subcontracted analysis; see attached report

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

SUB

ESS Laboratory Work Order: 1507735

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte

Page 8 of 11



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507735

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179 http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750 http://www.ct.gov/dph/lib/dph/environmental health/environmental laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002 http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

> Massachusetts Potable and Non Potable Water: M-RI002 http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424 http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313 http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006 http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752 http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory accreditation program/590095

Sample and Cooler Receipt Checklist

Client: Strategic Environmental Services

Client Project ID: Shipped/Delivered Via: ESS Courier

ESS Project ID: <u>15070735</u> Date Project Due: 8/7/15 Days For Project: 5 Day

Items to be checked upon receipt:

1. Air Bill Manifest Present?	* No	10. Are the samples properly preserved?	Yes						
Air No.:		11. Proper sample containers used?	Yes						
2. Were Custody Seals Present?	No	12. Any air bubbles in the VOA vials?	N/A						
3. Were Custody Seals Intact?	N/A	13. Holding times exceeded?	No						
4. Is Radiation count < 100 CPM?	Yes	14. Sufficient sample volumes?	Yes						
5. Is a cooler present?	Yes	15. Any Subcontracting needed?	No						
Cooler Temp: 4.1		16. Are ESS labels on correct containers?	Yes No						
Iced With: Ice		17. Were samples received intact?	Yes No						
6. Was COC included with samples?	Yes	ESS Sample IDs:							
7. Was COC signed and dated by client?	Yes	Sub Lab:							
8. Does the COC match the sample	Yes	Analysis:							
9. Is COC complete and correct?	Yes	TAT:							
18. Was there need to call project manag	jer to discu	ss status? If yes, please explain.							
Who was called?:	Who was called?: By whom?								
Sample Number Properly Preser	ved Conta	iner Type # of Containers Preservative							
1 Yes 2 Yes		Soil Jar 1 NP							
Completed By:		Soil Jar 1 NP $\frac{7}{2}$							
Reviewed By: Onl 20	Date/Tim Date/Tim								

ESS La	ESS Laboratory				CHAIN OF CUSTODY					ESS Lab# /507 73)						
Division of Thielsch Engineering, Inc.				Turn Time X Standard Other												
		ranston RI 029	10-2211	Regulatory	State: MA RI	CT NH NJ N	/ ME O	her		Reporting Limits - EPA (1 ppm						
		ax (401)461-448	36			llowing:(please ci			·	<u> </u>	ectonic Delive	rables *F	YCAL A	rees D	ne	\dashv
Co. Name			<u> </u>	MA-MCP Project#	Navy, USAC	Project Name					ectoriic Delive	anes L	ACCI A	LCSS P	1 1	4
Contact Person	ATEGIC	ENVI	RONMGNIST	. 15 - 03 Proj. Location	15	Project Name PolloC/C	ELE	MENTAR	7	ر س						ı
Koss	Hart:	man			ISIANA			•		Analysis	:					ļ
Address 362 Po		Hill RO	City , State SUTTO		200	Zip 01590	2	PO#	u .	Ana	22					
Tel.)	ATON RD	email:	,, ,	ns	01570	<u></u>				CB					
ESS Lab ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sam	ple ID	Pres Code	# of Containers	Type of Container	Vol of Container	A A					
1	3/30/15	13:00	G		ζ-	1		į	AG		X					1
2	7/30/15	13:00	G		C -	9		1	A6		$\frac{\lambda}{x}$				++	1
	1//2-/:2	1,3,00			<u> </u>	<u> </u>	 		776		-			-	+	_
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Cooler Prese		ober Glass S-Sterile V-		/		D-Solid D-Sluige WV										
Seals Intact	***************************************	Yes	_	Internal Use		Preservation Code		ICI, 3-H2SO4,	4-HNO3, 5-N	aOH, 6-MeO	H, 7-Asorbic A	kcid, 8-ZnA	lct, 9	_	•	
1		No NA:_ 1		Pickup		Sampled by : Cómments:	15R									
Cooler Temp		,	-2/3	[]. Technici	an	Comments.										
Relintinished by: (Sig	Reliphylished by: (Signature, Date & Tine) Received by: (Signature, Date & Tine)			ture, Date & Time)	may		Relinquished	by: (Signature,	Date & Time)	9	Received by: (Si	gnature, Da	te & Time)	11	()	
Relinquished by: (Signature, Date & Time) Received by: (Signature, Date &			ture Data & Time)	15 14.5) 7-31 17:06			Noughost 7/3/15/83					7				
	received by: (algnature, Date			tarw, water at times,			Keiinquisneo	by: (Signature, I	Date & Time)	ļ ^f	Received by: (St	gnature, Dai	e & Time)	_		1
age																
By circling MA-MCF		•	Dancet ##	athad Dis	Please fax to the	laboratory all cha	anges to C	hain of Cust	tody						····	
collected in accorda	IRCE WITH MADEP C	AM VIIA	vehou M	aruod Dis	nk & Labo	ratory Con	troi Sa	ımple R	esults							



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Ross Hartman Strategic Environmental Services 362 Putnam Hill Road Sutton, MA 01590

RE: Pollock Elementary (15-0515)

ESS Laboratory Work Order Number: 1507730

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laboratory Director

REVIEWED

By ESS Laboratory at 12:53 pm, Aug 07, 2015

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

SAMPLE RECEIPT

The following samples were received on July 31, 2015 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
1507730-01	Α	Solid	8082A
1507730-02	W-1	Wipe	8082A
1507730-03	В	Solid	8082A
1507730-04	W-2	Wipe	8082A
1507730-05	C	Solid	8082A
1507730-06	D	Solid	8082A
1507730-07	E	Solid	8082A
1507730-08	W-4	Wipe	8082A
1507730-09	F	Solid	8082A
1507730-10	G	Solid	8082A
1507730-11	H	Solid	8082A
1507730-12	I	Solid	8082A
1507730-13	J	Solid	8082A
1507730-14	K	Solid	8082A
1507730-15	W-5	Wipe	8082A
1507730-16	W-6	Wipe	8082A
1507730-17	W-7	Wipe	8082A
1507730-18	W-8	Wipe	8082A
1507730-19	W-9	Wipe	8082A
1507730-20	W-10	Wipe	8082A
1507730-21	W-11	Wipe	8082A
1507730-22	W-3	Wipe	8082A



BAL Laboratory
The Microbiology Division

of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint

6010C - ICP

6020A - ICP MS

7010 - Graphite Furnace

7196A - Hexavalent Chromium

7470A - Aqueous Mercury

7471B - Solid Mercury

8011 - EDB/DBCP/TCP.

8015D - GRO/DRO

8081B - Pesticides

8082A - PCB

8100M - TPH

8151A - Herbicides

8260B - VOA

8270D - SVOA

8270D SIM - SVOA Low Level

9014 - Cyanide

9038 - Sulfate

9040C - Aqueous pH

9045D - Solid pH (Corrosivity)

9050A - Specific Conductance

9056A - Anions (IC)

9060A - TOC

9095B - Paint Filter

MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion

3020A - Aqueous Graphite Furnace / ICP MS Digestion

3050B - Solid ICP / Graphite Furnace / ICP MS Digestion

3060A - Solid Hexavalent Chromium Digestion

3510C - Separatory Funnel Extraction

3520C - Liquid / Liquid Extraction

3540C - Manual Soxhlet Extraction

3541 - Automated Soxhlet Extraction

3546 - Microwave Extraction

3580A - Waste Dilution

5030B - Aqueous Purge and Trap

5030C - Aqueous Purge and Trap

5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

Dependability



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: A

Date Sampled: 07/30/15 09:55

Percent Solids: 100 Initial Volume: 7.21 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-01

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

Analyte	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence Ba	atch
Aroclor 1016	ND (0.1)		8082A		1	08/05/15 5:53		50308
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 5:53	CH	150308
Aroclor 1232	ND (0.1)		8082A		1	08/05/15 5:53	CH	50308
Aroclor 1242	ND (0.1)		8082A		1	08/05/15 5:53	CH	150308
Aroclor 1248	ND (0.1)		8082A		1	08/05/15 5:53	CH	150308
Aroclor 1254	0.8 (0.1)		8082A		1	08/05/15 5:53	CH	50308
Aroclor 1260	0.3 (0.1)		8082A		1	08/05/15 5:53	CH	50308
Aroclor 1262	ND (0.1)		8082A		1	08/05/15 5:53	CH	50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 5:53	CH	50308
	%;	Recovery	Qualifier	Limits				
Surrogate: Decachlorobiphenyl		103 %		30-150				
Surrogate: Decachlorobiphenyl [2C]		98 %		30-150				
Surrogate: Tetrachloro-m-xylene		111 %		30-150				
Surrogate: Tetrachloro-m-xylene [2C]		101 %		30-150	-			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-1

Date Sampled: 07/30/15 09:55

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-02

Sample Matrix: Wipe

Units: ug/Wipe Analyst: JXS

Prepared: 8/3/15 18:35

Analyte Aroclor 1016	Results (MRL) ND (1.0)	<u>MDL</u>	Method 8082A	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence Batch
Aroclor 1221	ND (1.0)		8082A		1	08/05/15 6:12 08/05/15 6:12	
Aroclor 1232	ND (1.0)		8082A		1	08/05/15 6:12	7117 50 20
Aroclor 1242	ND (1.0)		8082A		1	08/05/15 6:12	
Aroclor 1248	ND (1.0)		8082A		1 ,	08/05/15 6:12	CH50323
Aroclor 1254	ND (1.0)		8082A		1	08/05/15 6:12	CH50323
Aroclor 1260	2.6 (1.0)		8082A		1	08/05/15 6:12	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/05/15 6:12	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/05/15 6:12	CH50323
	%1	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		<i>79 %</i>		30-150			
Surrogate: Decachlorobiphenyl [2C]		<i>76</i> %		30-150			
Surrogate: Tetrachloro-m-xylene		85 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		76 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: B

Date Sampled: 07/30/15 10:00

Percent Solids: 100 Initial Volume: 10.1 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-03

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

Analyte	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence Batch
Aroclor 1016	ND (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1232	ND (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1242	ND (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1248	ND (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1254	0.9 (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1260	1.7 (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1262	ND (0.1)		8082A		1	08/05/15 6:31	CH50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 6:31	CH50308
	%	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		101 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		92 %		30-150			
Surrogate: Tetrachloro-m-xylene		98 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		86 %		30-150			•



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-2

Date Sampled: 07/30/15 10:10

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-04

Sample Matrix: Wipe

Units: ug/Wipe Analyst: JXS

Prepared: 8/3/15 18:35

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	<u>Method</u>	<u>Limit</u>	\mathbf{DF}	Analyzed	Sequence Batch
Aroclor 1016	ND (1.0)		8082A		1 .	08/05/15 6:50	CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/05/15 6:50	CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/05/15 6:50	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/05/15 6:50	CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/05/15 6:50	CH50323
Aroclor 1254	8.7 (1.0)		8082A		1	08/05/15 6:50	CH50323
Aroclor 1260	24.0 (5.0)		8082A		5	08/05/15 23:04	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/05/15 6:50	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/05/15 6:50	CH50323
***************************************	%)	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		98 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		93 %		30-150			
Surrogate: Tetrachloro-m-xylene		105 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		94 %		30-150		•	

Dependability



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: C

Date Sampled: 07/30/15 10:15

Percent Solids: 100 Initial Volume: 10 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-05

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

<u>Analyte</u>	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence Batch
Aroclor 1016	ND (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1232	ND (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1242	ND (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1248	ND (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1254	1.2 (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1260	1.8 (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1262	ND (0.1)		8082A		1	08/05/15 7:09	CH50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 7:09	CH50308
	961	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		99 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		94 %		30-150			
Surrogate: Tetrachloro-m-xylene		110 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		99 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: D

Date Sampled: 07/30/15 10:15

Percent Solids: 100 Initial Volume: 10 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-06

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

Analyte Aroclor 1016	Results (MRL)	<u>MDL</u>	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence Batch
	ND (0.1)		8082A		1	08/05/15 7:28	CH50308
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 7:28	CH50308
Aroclor 1232	ND (0.1)		8082A		I	08/05/15 7:28	CH50308
Aroclor 1242	ND (0.1)		8082A		1	08/05/15 7:28	CH50308
Aroclor 1248	ND (0.1)		8082A		1	08/05/15 7:28	CH50308
Aroclor 1254	5.8 (0.5)		8082A		5	08/05/15 23:22	CH50308
Aroclor 1260	2.5 (0.5)		8082A		5	08/05/15 23:22	CH50308
Aroclor 1262	ND (0.1)		8082A		1	08/05/15 7:28	CH50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 7:28	CH50308
	%,	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		99 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		94 %		30-150			
Surrogate: Tetrachloro-m-xylene		101 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		92 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: E

Date Sampled: 07/30/15 10:20

Percent Solids: 100 Initial Volume: 10 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-07

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

Analyte	Results (MRL)	<u>MDL</u>	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1232	ND (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1242	ND (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1248	ND (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1254	1.0 (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1260	0.5 (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1262	ND (0.1)		8082A		1	08/05/15 7:47		CH50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 7:47		CH50308
	%	Recovery	Qualifier	Limits			***************************************	
Surrogate: Decachlorobiphenyl		86 %		30-150				
Surrogate: Decachlorobiphenyl [2C]		81 %		30-150				
Surrogate: Tetrachloro-m-xylene		88 %		30-150				
Surrogate: Tetrachloro-m-xylene [2C]		78 %		30-150				



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-4

Date Sampled: 07/30/15 10:25

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-08

Sample Matrix: Wipe

Units: ug/Wipe Analyst: JXS

Prepared: 8/3/15 18:35

Analyte Aroclor 1016	Results (MRL) ND (1.0)	<u>MDL</u>	Method 8082A	<u>Limit</u>	$\frac{\mathbf{DF}}{\mathbf{I}}$		Batch
Aroclor 1221	ND (1.0) ND (1.0)		8082A		1		H50323
Aroclor 1232	ND (1.0)		8082A		1		H50323
Aroclor 1242	ND (1.0)		8082A		1	_	H50323
Aroclor 1248	ND (1.0)	÷	8082A		1		H50323
Aroclor 1254	ND (1.0)		8082A		1	08/05/15 8:06 C	H50323
Aroclor 1260	ND (1.0)	4	8082A		1	08/05/15 8:06 C	H50323
Aroclor 1262	4.5 (1.0)		8082A		1	08/05/15 8:06 C	H50323
Aroclor 1268	ND (1.0)		8082A		1	08/05/15 8:06 C	H50323
	%;	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		96 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		91 %		30-150			
Surrogate: Tetrachloro-m-xylene		105 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		93 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: F

Date Sampled: 07/30/15 10:25

Percent Solids: 99 Initial Volume: 10 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-09

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

<u>Analyte</u>	Results (MRL)	MDL	Method	Limit	<u>DF</u>	Analyzed	Sequence Batch
Aroclor 1016	ND (0.1)		8082A		1	08/05/15 8:2	
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 8:2	4 CH50308
Aroclor 1232	ND (0.1)		8082A		1	08/05/15 8:2	4 CH50308
Aroclor 1242	ND (0.1)		8082A	-	1	08/05/15 8:2	4 CH50308
Araclor 1248	ND (0.1)		8082A		1	08/05/15 8:2	4 CH50308
Aroclor 1254	1.4 (0.1)		8082A		İ	08/05/15 8:2	4 CH50308
Aroclor 1260	ND (0.1)		8082A		1	08/05/15 8:2	4 CH50308
Aroclor 1262	1.8 (0.1)		8082A		1	08/05/15 8:2	4 CH50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 8:2	4 CH50308
**************************************	%	Recovery	Qualifier	Limits		***************************************	- A.M Up.,
Surrogate: Decachlorobiphenyl		96 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		92 %		30-150			
Surrogate: Tetrachloro-m-xylene		102 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	÷	90 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: G

Date Sampled: 07/30/15 10:30

Percent Solids: 100 Initial Volume: 10 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-10

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

<u>Analyte</u>	Results (MRL)	MDL	Method	Limit	<u>DF</u>	Analyzed	Sequence Batch
Aroclor 1016	ND (0.1)		8082A		1	08/05/15 8:43	CH50308
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 8:43	CH50308
Aroclor 1232	ND (0.1)		8082A		1	08/05/15 8:43	CH50308
Aroclor 1242	ND (0.1)		8082A		1	08/05/15 8:43	CH50308
Aroclor 1248	ND (0.1)		8082A		1	08/05/15 8:43	CH50308
Aroclor 1254	10.5 (1.0)		8082A		10	08/05/15 23:41	CH50308
Aroclor 1260	ND (0.1)		8082A		1	08/05/15 8:43	CH50308
Aroclor 1262	15.8 (1.0)		8082A		10	08/05/15 23:41	CH50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 8:43	CH50308
	9	6Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		114 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		114 %		30-150			
Surrogate: Tetrachloro-m-xylene		104 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		93 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: H

Date Sampled: 07/30/15 10:30

Percent Solids: 100 Initial Volume: 7.4 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-11

Sample Matrix: Solid Units: mg/kg dry Analyst: JXS

Prepared: 8/3/15 18:35

<u>Analyte</u>	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>	<u>Analyze</u>	d Sequence	Batch
Aroclor 1016	ND (0.1)		8082A		1	08/05/15 9:0)2	CH50308
Aroclor 1221	ND (0.1)		8082A		1	08/05/15 9:6)2	CH50308
Aroclor 1232	ND (0.1)		8082A		1	08/05/15 9:6)2	CH50308
Aroclor 1242	ND (0.1)		8082A		1	08/05/15 9:6	02	CH50308
Aroclor 1248	ND (0.1)		8082A		1	08/05/15 9:6)2	CH50308
Aroclor 1254	6.3 (0.7)		8082A		5	08/06/15 0:6	00	CH50308
Aroclor 1260	ND (0.1)		8082A		1	08/05/15 9:0)2	CH50308
Aroclor 1262	11.4 (0.7)		8082A		5	08/06/15 0:0	00	CH50308
Aroclor 1268	ND (0.1)		8082A		1	08/05/15 9:0)2	CH50308
· · · · · · · · · · · · · · · · · · ·	%1	Recovery	Qualifier	Limits				
Surrogate: Decachlorobiphenyl		77 %		30-150				
Surrogate: Decachlorobiphenyl [2C]		<i>75</i> %		30-150				
Surrogate: Tetrachloro-m-xylene		103 %		30-150				
Surrogate: Tetrachloro-m-xylene [2C]		88 %		30-150				



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: I

Date Sampled: 07/30/15 10:35

Percent Solids: 100 Initial Volume: 5.25 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-12

Sample Matrix: Solid Units: mg/kg dry Analyst: TJ

Prepared: 8/3/15 18:35

Analyte Aroclor 1016	Results (MRL) ND (0.2)	<u>MDL</u>	Method 8082A	<u>Limit</u>	$\frac{\mathbf{DF}}{1}$	<u>Analyzed</u> 9	Sequence Batch CH50308
Aroclor 1221	ND (0.2)		8082A		1	08/04/15 20:21	CH50308
Aroclor 1232	ND (0.2)		8082A		1	08/04/15 20:21	CH50308
Aroclor 1242	ND (0.2)		8082A		i	08/04/15 20:21	CH50308
Aroclor 1248	ND (0.2)		8082A		1	08/04/15 20:21	CH50308
Aroclor 1254	0.7 (0.2)		8082A		1	08/04/15 20:21	CH50308
Aroclor 1260	0.6 (0.2)	-	8082A		1	08/04/15 20:21	CH50308
Aroclor 1262	ND (0.2)		8082A	•	1	08/04/15 20:21	CH50308
Aroclor 1268	ND (0.2)		8082A		1	08/04/15 20:21	CH50308
	%)	Recovery	Qualifier	Limits		,	
Surrogate: Decachlorobiphenyl		<i>75</i> %		30-150			
Surrogate: Decachlorobiphenyl [2C]		83 %		30-150			
Surrogate: Tetrachloro-m-xylene		81 %		30-150			
Surrogate: Tetrachioro-m-xylene [2C]		96 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: J

Date Sampled: 07/30/15 10:40

Percent Solids: 100 Initial Volume: 8.61 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-13

Sample Matrix: Solid Units: mg/kg dry Analyst: TJ

Prepared: 8/3/15 18:35

Analyte	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>	Analyzed Sequen	ce Batch
Aroclor 1016	ND (0.1)		8082A	•	1	08/04/15 22:17	CH50309
Aroclor 1221	ND (0.1)		8082A		1	08/04/15 22:17	CH50309
Aroclor 1232	ND (0.1)		8082A		1	08/04/15 22:17	CH50309
Aroclor 1242	ND (0.1)		8082A		1	08/04/15 22:17	CH50309
Aroclor 1248	ND (0.1)		8082A		1	08/04/15 22:17	CH50309
Aroclor 1254	0.1 (0.1)		8082A		1	08/04/15 22:17	CH50309
Aroclor 1260	ND (0.1)		8082A		1	08/04/15 22:17	CH50309
Aroclor 1262	ND (0.1)		8082A		1	08/04/15 22:17	CH50309
Aroclor 1268	ND (0.1)		8082A		1	08/04/15 22:17	CH50309
	%	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		82 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		91 %		30-150			
Surrogate: Tetrachloro-m-xylene		84 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		<i>85</i> %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: K

Date Sampled: 07/30/15 10:40

Percent Solids: 100 Initial Volume: 10 Final Volume: 10

Extraction Method: 3540C

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-14

Sample Matrix: Solid Units: mg/kg dry

Analyst: TJ Prepared: 8/3/15 18:35

Analyte Aroclor 1016	Results (MRL) ND (0.1)	MDL __	Method 8082A	<u>Limit</u>	$\frac{\mathbf{DF}}{1}$	<u>Analyzed</u> <u>Sequenc</u> 08/04/15 22:36	e Batch CH50309
Aroclor 1221	ND (0.1)		8082A		1	08/04/15 22:36	CH50309
Aroclor 1232	ND (0.1)		8082A		1	08/04/15 22:36	CH50309
Aroclor 1242	ND (0.1)		8082A		1	08/04/15 22:36	CH50309
Aroclor 1248	ND (0.1)		8082A		1	08/04/15 22:36	CH50309
Aroclor 1254	ND (0.1)	,	8082A		1	08/04/15 22:36	CH50309
Aroclor 1260	0.5 (0.1)		8082A		1	08/04/15 22:36	CH50309
Aroclor 1262	ND (0.1)		8082A		1	08/04/15 22:36	CH50309
Aroclor 1268	ND (0.1)		8082A		1	08/04/15 22:36	CH50309
	%/	Recovery	Qualifier	Limits		4	
Surrogate: Decachlorobiphenyl		82 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		93 %		30-150			
Surrogate: Tetrachloro-m-xylene		89 %		30-150			4
Surrogate: Tetrachloro-m-xylene [2C]		105 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-5

Date Sampled: 07/30/15 10:45

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-15

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

<u>Analyte</u>	Results (MRL)	$\underline{\mathbf{MDL}}$	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence Batch
Aroclor 1016	ND (1.0)		8082A		1	08/04/15 20:41	CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/04/15 20:41	CH50323
Aroclor 1232	ND (1.0)	,	8082A		1	08/04/15 20:41	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/04/15 20:41	CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/04/15 20:41	CH50323
Aroclor 1254	ND (1.0)		8082A	,	1	08/04/15 20:41	CH50323
Aroclor 1260	37.3 (5.0)		8082A		5	08/05/15 19:56	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/04/15 20:41	CH50323
Aroclor 1268	ND (1.0)		8082A	•	1	08/04/15 20:41	CH50323
	%	Recovery	Qualifier	Limits			***************************************
Surrogate: Decachlorobiphenyl		78 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		87 %		30-150			
Surrogate: Tetrachloro-m-xylene		84 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		100 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-6

Date Sampled: 07/30/15 10:45

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-16

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

<u>Analyte</u>	Results (MRL)	MDL	Method	Limit	$\overline{\mathbf{DF}}$	Analyzed	Sequence Batch
Aroclor 1016	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1254	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1260	1.6 (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/04/15 21:00	CH50323
	% <i>K</i>	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		81 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		90 %	•	30-150			
Surrogate: Tetrachloro-m-xylene		90 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		106 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-7

Date Sampled: 07/30/15 10:45

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-17

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

Analyte	Results (MRL)	<u>MDL</u>	Method	<u>Limit</u>	<u>DF</u>	Analyzed Sequence	
Aroclor 1016	ND (1.0)		8082A		. 1	08/04/15 21:19	CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/04/15 21:19	CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/04/15 21:19	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/04/15 21:19	CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/04/15 21:19	CH50323
Aroclor 1254	ND (1.0)		8082A		1	08/04/15 21:19	CH50323
Aroclor 1260	9.2 (1.0)		8082A		1	08/04/15 21:19	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/04/15 21:19	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/04/15 21:19	CH50323
<u> </u>	%/	Recovery	Qualifier	Limits		Labelity Community	
Surrogate: Decachlorobiphenyl		81 %		30-150			•
Surrogate: Decachlorobiphenyl [2C]		89 %		30-150			
Surrogate: Tetrachloro-m-xylene		88 %		30-150		•	
Surrogate: Tetrachloro-m-xylene [2C]		105 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-8

Date Sampled: 07/30/15 10:50

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-18

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

Analyte Aroclor 1016	Results (MRL) ND (1.0)	MDL	Method 8082A	<u>Limit</u>	$\frac{\mathbf{DF}}{1}$	Analyzed Sequence	Batch CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/04/15 21:38	CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/04/15 21:38	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/04/15 21:38	CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/04/15 21:38	CH50323
Aroclor 1254	ND (1.0)		8082A		1	08/04/15 21:38	CH50323
Aroclor 1260	13.5 (1.0)		8082A		1	08/04/15 21:38	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/04/15 21:38	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/04/15 21:38	CH50323
	%	Recovery	Qualifier	Limits	· · · · · · · · · · · · · · · · · · ·		
Surrogate: Decachlorobiphenyl		80 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		89 %		30-150		•	
Surrogate: Tetrachloro-m-xylene		90 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		107 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-9

Date Sampled: 07/30/15 10:50

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-19

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

<u>Analyte</u>	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>	Analyzed	Sequence	Batch
Aroclor 1016	ND (1.0)	-	8082A	·	1	08/04/15 21:58		CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/04/15 21:58		CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/04/15 21:58		CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/04/15 21:58		CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/04/15 21:58		CH50323
Aroclor 1254	ND (1.0)		8082A		1	08/04/15 21:58		CH50323
Aroclor 1260	5.1 (1.0)		8082A		1	08/04/15 21:58		CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/04/15 21:58		CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/04/15 21:58		CH50323
V11001-2-011-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	%	Recovery	Qualifier	Limits				
Surrogate: Decachlorobiphenyl		83 %		30-150				
Surrogate: Decachlorobiphenyl [2C]		93 %		30-150				
Surrogate: Tetrachloro-m-xylene		92 %		30-150		·		
Surrogate: Tetrachloro-m-xylene [2C]		109 %		30-150				



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-10

Date Sampled: 07/30/15 10:50

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-20

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

Analyte Aroclor 1016	Results (MRL) ND (1.0)	<u>MDL</u>	Method 8082A	<u>Limit</u>	$\frac{\mathbf{DF}}{1}$	<u>Analyzed</u> <u>Sequenc</u> 08/04/15 23:33	e Batch CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/04/15 23:33	CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/04/15 23:33	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/04/15 23:33	CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/04/15 23:33	CH50323
Aroclor 1254	ND (1.0)	•	8082A		1	08/04/15 23:33	CH50323
Aroclor 1260	ND (1.0)		8082A		1	08/04/15 23:33	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/04/15 23:33	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/04/15 23:33	CH50323
	%/	Recovery	Qualifier	Limits			
Surrogate: Decachlorobiphenyl		87 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		97 %		30-150			
Surrogate: Tetrachloro-m-xylene		92 %		30-150			
Surrogate: Tetrachloro-m-xylene [2C]		109 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-11

Date Sampled: 07/30/15 10:55

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-21

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

Analyte	Results (MRL)	MDL	Method	<u>Limit</u>	<u>DF</u>		ence Batch
Aroclor 1016	ND (1.0)		8082A		1	08/04/15 23:52	CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/04/15 23:52	CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/04/15 23:52	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/04/15 23:52	CH50323
Aroclor 1248	ND (1.0)		8082A	÷	1	08/04/15 23:52	CH50323
Aroclor 1254	ND (1.0)		8082A		1	08/04/15 23:52	CH50323
Aroclor 1260	2.1 (1.0)		8082A		1	08/04/15 23:52	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/04/15 23:52	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/04/15 23:52	CH50323
	%	Recovery	Qualifier	Limits		talining (see	
Surrogate: Decachlorobiphenyl		81 %		30-150			
Surrogate: Decachlorobiphenyl [2C]		91 %		30-150			
Surrogate: Tetrachloro-m-xylene		90 %		30-150	•		
Surrogate: Tetrachloro-m-xylene [2C]	÷	107 %		30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

Client Sample ID: W-3

Date Sampled: 07/30/15 00:00

Percent Solids: N/A Initial Volume: 1 Final Volume: 10

Extraction Method: 3540

ESS Laboratory Work Order: 1507730 ESS Laboratory Sample ID: 1507730-22

Sample Matrix: Wipe

Units: ug/Wipe Analyst: TJ

Prepared: 8/3/15 18:35

8082A Polychlorinated Biphenyls (PCB)

Analyte Aroclor 1016	Results (MRL) ND (1.0)	MDL	Method 8082A	<u>Limit</u>	$\frac{\mathbf{DF}}{1}$	<u>Analy</u> 08/05/15		Sequence Batch CH50323
Aroclor 1221	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
Aroclor 1232	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
Aroclor 1242	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
Aroclor 1248	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
Aroclor 1254	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
Aroclor 1260	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
Aroclor 1262	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
Aroclor 1268	ND (1.0)		8082A		1	08/05/15	0:11	CH50323
	%.	Recovery	Qualifier	Limits				
Surrogate: Decachlorobiphenyl		77 %		30-150				
Surrogate: Decachlorobiphenyl [2C]		87 %		30-150				
Surrogate: Tetrachloro-m-xylene		81 %		30-150				
Surrogate: Tetrachloro-m-xylene [2C]		97 %		30-150				

Service



The Microbiology Division of Thielsch Engineering, Inc.



RPD

CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

%REC

Quality Control Data

Spike

Source

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
•	80	82A Polyc	hlorinated	Bipheny	ls (PCB)			••••	
Batch CH50308 - 3540C										
Blank	X		- ·				S-24A		W.W.F	
Arocior 1016	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
roclor 1242	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Surrogate: Decachlorobiphenyl	0.0236		mg/kg wet	0.02500		94	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0234		mg/kg wet	0.02500	=	94	30-150			
Surrogate: Tetrachloro-m-xylene	0.0247		mg/kg wet	0.02500		99	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0225		mg/kg wet	0.02500		90	30-150			
.cs						***************************************		***************************************		
roclor 1016	0.5	0.05	mg/kg wet	0.5000		97	40-140			
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		97	40-140			
Surrogate: Decachlorobiphenyl	0.0245		mg/kg wet	0.02500		98	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0233		mg/kg wet	0.02500		93	30-150			
Surrogate: Tetrachloro-m-xylene	0.0258		mg/kg wet	0.02500		103	30-150			
Gurrogate: Tetrachloro-m-xylene [2C]	0.0236		mg/kg wet	0.02500		94	30-150			
CS Dup	 	······		••						
roclor 1016	0,5	0.05	mg/kg wet	0.5000		91	40-140	6	20	
roclor 1260	0.5	0.05	mg/kg wet	0.5000	·	97	40-140	0.7	20	
Surrogate: Decachlorobiphenyl	0.0243		mg/kg wet	0.02500	***	97	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0229		mg/kg wet	0.02500		92	30-150			•
Gurrogate: Tetrachloro-m-xylene	0.0255		mg/kg wet	0.02500		102	30-150			
urrogate: Tetrachloro-m-xylene [2C]	0.0239		mg/kg wet	0.02500		95	30-150			
atch CH50309 - 3540C				*****						
lank								300		. 214
roclor 1016	ND ND	0.05	mg/kg wet			 -				
roclor 1221	ND	0.05	mg/kg wet							
roclor 1232	ND	0.05	mg/kg wet							
roclor 1242	ND	0.05	mg/kg wet						_	
roclor 1248	ND	0.05	mg/kg wet						•	
roclor 1254	ND	0.05	mg/kg wet							
rocfor 1260	ND	0.05	. mg/kg wet							
roclor 1262	ND	0.05	mg/kg wet							
roclor 1268	ND	0.05	mg/kg wet							
Surrogate: Decachlorobiphenyl	0.0170	***************************************	mg/kg wet	0.02500		68	30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

Quality Control Data

Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 2C 0. LCS Aroclor 1016 Aroclor 1260 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachloro-m-xylene 2C 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 2C 0. LCS Dup Aroclor 1016 Aroclor 1260 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl 2C 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 2C 0. Batch CH50323 - 3540 Blank Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1254 Aroclor 1260 Aroclor 1260 Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl 0.	80: 0197 0196 0255 0.5 0.5 0.193 0220 0217 0251 0.5 0.5 0.5	0.05 0.05 0.05	mg/kg wet	0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500 0.02500 0.5000 0.02500 0.02500 0.02500	vis (PCB)	79 78 102 96 100 77 88 87 101	30-150 30-150 30-150 40-140 40-140 30-150 30-150 40-140 40-140 30-150	0.9	20 20	
Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene	0196 0255 0.5 0.5 0193 0220 0217 0251 0.5 0.5	0.05	mg/kg wet	0.02500 0.02500 0.5000 0.5000 0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		78 102 96 100 77 88 87 101 97 101	30-150 30-150 40-140 40-140 30-150 30-150 30-150 40-140 40-140			
Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 2C] 0. LCS 1260 1. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl 2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 2C] 0. LCS Dup 1. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 1. Surcolor 1261 1. Surcolor 1211 1. Surcolor 1221 1. Surcolor 1242 1. Surcolor 1248 1. Surcolor 1260 1. Surrogate: Decachlorobiphenyl 0.	0196 0255 0.5 0.5 0193 0220 0217 0251 0.5 0.5	0.05	mg/kg wet	0.02500 0.02500 0.5000 0.5000 0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		78 102 96 100 77 88 87 101 97 101	30-150 30-150 40-140 40-140 30-150 30-150 30-150 40-140 40-140			
Surrogate: Tetrachloro-m-xylene [2C] LCS Aroclor 1016 Aroclor 1260 Surrogate: Decachlorobiphenyl Surrogate: Decachloro-m-xylene Surrogate: Tetrachloro-m-xylene Surrogate: Tetrachloro-m-xylene [2C] CS Dup Aroclor 1016 Aroclor 1260 Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl Surrogate: Tetrachloro-m-xylene Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl	0.255 0.5 0.5 0.93 0.220 0.217 0.251 0.5 0.5 0.193 0.218	0.05	mg/kg wet	0.02500 0.5000 0.5000 0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500 0.02500		96 100 77 88 87 101 97 101	30-150 40-140 40-140 30-150 30-150 30-150 40-140 40-140			
Aroclor 1016 Aroclor 1260 Surrogate: Decachlorobiphenyl	0.5 0.5 0.220 0.2217 0.251 0.5 0.5 0.193 0.218	0.05	mg/kg wet	0.5000 0.5000 0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		96 100 77 88 87 101 97 101	40-140 40-140 30-150 30-150 30-150 30-150 40-140 40-140			
Aroclor 1016 Aroclor 1260 Surrogate: Decachlorobiphenyl	0.5 0.193 0.220 0.217 0.251 0.5 0.193 0.218	0.05	mg/kg wet	0.5000 0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		100 77 88 87 101 97 101	40-140 30-150 30-150 30-150 30-150 40-140 40-140			
Surrogate: Decachlorobiphenyl	0.5 0.193 0.220 0.217 0.251 0.5 0.193 0.218	0.05	mg/kg wet	0.5000 0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		100 77 88 87 101 97 101	40-140 30-150 30-150 30-150 30-150 40-140 40-140			
Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. CS Dup Aroclor 1016 (0. Surrogate: Decachlorobiphenyl 10. Surrogate: Decachlorobiphenyl 12C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 12C] 0. Batch CH50323 - 3540 Slank Aroclor 1211 (1. Aroclor 1221 (1. Aroclor 1242 (1. Aroclor 1248 (1. Aroclor 1254 (1. Aroclor 1260 (1. Aroclor 1260 (1. Aroclor 1262 (1. Aroclor 1268 (1. Aroclor 1269 (1. Aroclor 1269 (1. Aroclor 1269 (1. Aroclor 1268 (1. Aroclor 1269 (1. Aroclor 1268 (1. Aroclor 1268 (1. Aroclor 1269 (0.193 0.220 0.217 0.251 0.5 0.5 0.193 0.218	0.05	mg/kg wet	0.02500 0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		77 88 87 101 97 101	30-150 30-150 30-150 30-150 40-140 40-140			
Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. CS Dup Aroclor 1016 Aroclor 1260 Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. Batch CH50323 - 3540 Slank Aroclor 1016 Aroclor 1221 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0.	0220 0217 0251 0.5 0.5 0.93 0218		mg/kg wet	0.02500 0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		88 87 101 97 101	30-150 30-150 30-150 40-140 40-140			
Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. CS Dup Vocolor 1016 0. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene 0. Statch CH50323 - 3540 Slank Vocolor 1016 1. Suroclor 1221 1. Suroclor 1232 1. Suroclor 1242 1. Suroclor 1254 1. Suroclor 1260 1. Suroclor 1260 1. Suroclor 1262 1. Suroclor 1268 1. Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Decachlorobiphenyl [2C] 0.	0217 0251 0.5 0.5 0.93 0218		mg/kg wet	0.02500 0.02500 0.5000 0.5000 0.02500 0.02500		97 101 77	30-150 30-150 40-140 40-140			
Surrogate: Tetrachloro-m-xylene [2C] 0. CS Dup Aroclor 1016 Aroclor 1260 Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. Statch CH50323 - 3540 Slank Aroclor 1221 Aroclor 1221 Aroclor 1242 Aroclor 1254 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0.	0.251 0.5 0.5 0.193 0218		mg/kg wet mg/kg wet mg/kg wet mg/kg wet mg/kg wet mg/kg wet	0.02500 0.5000 0.5000 0.02500 0.02500		97 101	30-150 40-140 40-140			
Aroclor 1016	0.5 0.5 0193 0218		mg/kg wet mg/kg wet mg/kg wet mg/kg wet mg/kg wet	0.5000 0.5000 0.02500 0.02500		97 101	40-140 40-140			
Aroclor 1016 Aroclor 1260 Surrogate: Decachlorobiphenyl Surrogate: Tetrachloro-m-xylene Surrogate: Tetrachloro-m-xylene [2C] Batch CH50323 - 3540 Blank Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl [2C] Surrogate: Decachlorobiphenyl [2C]	0.5 0193 0218 0218		mg/kg wet mg/kg wet mg/kg wet mg/kg wet	0.5000 0.02500 0.02500		101 <i>77</i>	40-140			
Aroclor 1260 Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. Batch CH50323 - 3540 Blank Aroclor 1016 1. Aroclor 1221 1. Aroclor 1232 1. Aroclor 1242 1. Aroclor 1248 1. Aroclor 1254 1. Aroclor 1260 1. Aroclor 1262 1. Aroclor 1268 1. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Decachlorobiphenyl [2C] 0.	0.5 0193 0218 0218		mg/kg wet mg/kg wet mg/kg wet mg/kg wet	0.5000 0.02500 0.02500		101 <i>77</i>	40-140			
Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. Batch CH50323 - 3540 Blank Aroclor 1016 1. Aroclor 1221 1. Aroclor 1232 1. Aroclor 1242 1. Aroclor 1248 1. Aroclor 1254 1. Aroclor 1260 1. Aroclor 1262 1. Aroclor 1268 1. Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Decachlorobiphenyl [2C] 0.)193)218)218	0.05	mg/kg wet mg/kg wet mg/kg wet	0.02500 0.02500		77	-			
Surrogate: Decachlorobiphenyl [2C] 0. Surrogate: Tetrachloro-m-xylene 0. Surrogate: Tetrachloro-m-xylene [2C] 0. Satch CH50323 - 3540 Slank Aroclor 1016	0218 0218		mg/kg wet mg/kg wet	0.02500			30-150			
Surrogate: Tetrachloro-m-xylene	0218		mg/kg wet							
Surrogate: Tetrachloro-m-xylene [2C] 0.1 Statch CH50323 - 3540 Stank Varoclor 1016				0.02500		87	30-150			
Blank Iroclor 1016 Iroclor 1221 Iroclor 1232 Iroclor 1242 Iroclor 1254 Iroclor 1260 Iroclor 1262 Iroclor 1268 Iroclor 1268 Iroclor 1268 Iroclor 1269 Iroclor 1268 Iroclor 1	0250		ma/ka wet			87	30-150	•		
Starrogate: Decachlorobiphenyl [2C] Starcolor 1221 Starcolor 1221 Starcolor 1221 Starcolor 1232 Starcolor 1242 Starcolor 1248 Starcolor 1254 Starcolor 1260 Starcolor 1262 Starcolor 1268 Starrogate: Decachlorobiphenyl O. Starrogate: Decachlorobiphenyl [2C]				0.02500		100	<i>30-150</i>			
Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268							***************************************			
Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl Couragate: Decachlorobiphenyl		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 Furrogate: Decachlorobiphenyl Courrogate: Decachlorobiphenyl [2C] Courrogate: Decachlorobiphenyl [2C]	ID	1.0	ug/Wipe							
Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 Furrogate: Decachlorobiphenyl Furrogate: Decachlorobiphenyl [2C] Output Outpu	ID	1.0	ug/Wipe							
Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl [2C] Output Decachlorobiphenyl [2C]	ID	1.0	ug/Wipe							
Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl O. Surrogate: Decachlorobiphenyl [2C] O.	ID	1.0	ug/Wipe							
Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl O. Surrogate: Decachlorobiphenyl [2C] O.	ID	1.0	ug/Wipe							
Aroclor 1262 Aroclor 1268 Surrogate: Decachlorobiphenyl Surrogate: Decachlorobiphenyl [2C] O.	D	1.0	ug/Wipe							
Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0.	D	1.0	ug/Wipe							
Surrogate: Decachlorobiphenyl 0. Surrogate: Decachlorobiphenyl [2C] 0.	D	1.0	ug/Wipe							
Surrogate: Decachlorobiphenyl [2C] 0.	D	1.0	ug/Wipe							
· · · · · · · · · · · · · · · · · · ·	471		ug/Wipe	0.5000		94	30-150			
Surronata: Tetrachloro-m-vidono 0.	168		ug/Wipe	0.5000		94	30-150			
	194		ug/Wipe	0.5000		99	<i>30-150</i>	•		
Surrogate: Tetrachloro-m-xylene [2C] 0.	150		ug/Wipe	0.5000		90	<i>30-150</i>			
CS										
	.7	1.0	ug/Wipe	10.00		97	40-140			
roclor 1260	.7	1.0	ug/Wipe	10.00		97	40-140			
Surrogate: Decachlorobiphenyl 0.	190		ug/Wipe	0.5000		98	30-150			
- · · ·			ug/Wipe	0.5000		93	30-150			
	166		ug/Wipe	0.5000		103	30-150			
Surrogate: Tetrachloro-m-xylene [2C] 0.	166 516		ug/Wipe	0.5000		94	30-150			



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

Quality Control Data

<u>.</u>				Spike	Source		%REC		RPD	
Analyte	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifier
	808	32A Polycl	hlorinated	Biphen	yls (PCB)				
Batch CH50323 - 3540										
Aroclor 1016	9.1	1.0	ug/Wipe	10.00		91	40-140	6	20	
Aroclor 1260	9.7	1.0	ug/Wipe	10.00		97	40-140	0.7	20	
Surrogate: Decachlorobiphenyl	0.485		ug/Wipe	0.5000		97	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.458		ug/Wipe	0.5000		92	30-150			
Surrogate: Tetrachloro-m-xylene	0.510		ug/Wipe	0.5000		102	<i>30-150</i>			
Surrogate: Tetrachloro-m-xylene [2C]	0.477		ug/Wipe	0.5000		95	30-150			



The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis

ur y	pampic results reported off a c
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit

LUQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§.	Subcontracted analysis; see attached repor

.5	substantial and side
1	Denomination 1 1
1	Kange result excludes concentrations of surrogates and/or internal standards obtting in that range
_	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.

2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.

Avg	Results reported as a mathematical average.	
3 TT-	· · · · · · · · · · · · · · · · · · ·	

NR	No Recovery
[CALC]	Calculated Analyte
CLID	01

Subcontracted analysis; see attached report SUB



The Microbiology Division of Thielsch Engineering, Inc.



CERTIFICATE OF ANALYSIS

Client Name: Strategic Environmental Services

Client Project ID: Pollock Elementary

ESS Laboratory Work Order: 1507730

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179 http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750 http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002 http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

> Massachusetts Potable and Non Potable Water: M-RI002 http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424 http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313 http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006 http://datamine2.state.nj.us/DEP OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752 http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory accreditation program/590095

Dependability

Sample and Cooler Receipt Checklist

Client: Strategic Environmental Services
Client Project ID:

Shipped/Delivered Via: ESS Courier

ESS Project ID: 15070730
Date Project Due: 8/7/15
Days For Project: 5 Day

Items to be checked upon receipt:

* No	10. Are the samples properly preserved:	Yes
	11. Proper sample containers used?	Yes
No	12. Any air bubbles in the VOA vials?	N/A
N/A	13. Holding times exceeded?	No
Yes	14. Sufficient sample volumes?	Yes
Yes	15. Any Subcontracting needed?	No
	16. Are ESS labels on correct containers?	YeslNo
	17. Were samples received intact? / (Yes No
Yes	ESS Sample IDs:	_
Yes	Sub Lab:	
Yes	Analysis:	
Yes	TAT:	
ar to disci	ice etatus? If was inlease explain	
jer to uiset	ass status: If yes, prease explain	
, , , , , , , , , , , , , , , , , , , ,		
	Yes Yes Yes Yes Yes Yes	11. Proper sample containers used? No 12. Any air bubbles in the VOA vials? 13. Holding times exceeded? Yes 14. Sufficient sample volumes? Yes 15. Any Subcontracting needed? 16. Are ESS labels on correct containers? 17. Were samples received intact? Yes ESS Sample IDs: Yes Analysis:

Who was called?:		By who			
Sample Number	Properly Preserved	Container Type	# of Containers	Preservative	
1	Yes	4 oz Soil Jar	1	NP	
2	Yes	4 oz Soil Jar	1	NP	
3	Yes	4 oz Soil Jar	. 1	NP	
4	Yes	4 oz Soil Jar	1	ΝP	
5	Yes	4 oz Soil Jar	1	NP	
6	Yes	4 oz Soil Jar	1	NP	
7	Yes	4 oz Soil Jar	1	NP	
8	Yes	4 oz Soil Jar	1	NP	
9	Yes	4 oz Soil Jar	1	NP	
10	Yes	4 oz Soil Jar	1	NP	
11	Yes	4 oz Soil Jar	1	NP	
12	Yes	4 oz Soil Jar	1	NP	
13	Yes	4 oz Soil Jar	1	NP	
14	Yes	4 oz Soil Jar	1	NP	
15	Yes	4 oz Soil Jar	1 '	NP	
16	Yes	4 oz Soil Jar	1	NP	
17	Yes	4 oz Soil Jar	1	NP	
18	Yes	4 oz Soil Jar	1	NP	
19	Yes	4 oz Soil Jar	1	NP	
20	Yes	4 oz Soil Jar	1	NP	
21	Yes	4 oz Soil Jar	1 '	NP	
22	Yes	4 oz Soil Jar	, 1	NP .	
Completed By:		ate/Time: 7/3	1113 100	4	
Reviewed By: ///////	<u>08C</u> D	ate/Time: <u> 7/3/</u>	1/18 /835		

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Pglof3

ESS Laboratory	CHAIN OF CUSTODY					ESS Lab # 150730							
Division of Thielsch Engineering, Inc. Turn TimeStandard Other							Penerfinal limits EPA CI POM						
185 Frances Avenue, Cranston RI 02910		State: MA RI (CT NH NJ NY ME Other										
Tel. (401)461-7181 Fax (401)461-4486 www.esslaboratory.com	Is this project MA-MCP		lowing:(please circ				El	ectonic Delive	rables '	Excel	Access	PDF	
Co. Name	Project #		Project Name Pollocic	-			,			ТТ	T	1	7
STRATEGIC FNUIRON ME. Contact Person	Proj. Location	`	Pollogic	121	EMBN	1114	ŝ				11		
ROSS HART MAN	City , State	SIAMA	1		PO#		Analysis						
	SUTTON	mo	Zip <i>ひ</i> /Ŝタロ		PO#	•	An	8	-				
Tel. e	email:							6					
ESS Lab ID Date Collection Time	Grab -G Matrix Composite-C Matrix	Sam	ple ID	Pres Code	# of Containers	Type of Container	Vol of Container	15					
01 7/30/15 9:55	G	A			1	A6		4					
02 1/3d15 9:55	G	W-1			1	A6		义				T	
053 7/30/15 10:00	6	B			1	AG		X					
OY 0/30/15 10:10	G	W-2			ı	A6		又				\top	
05 9/30/15 10:15	6	C			1	A6		Z					
06 7/30/15 10:15	6	D			1	AG		X	<u> </u>				
05) 1/30/15 10:20	G	E			l	A6		X					
Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VC	OA	Matrix: S-Soil S	D-Solid D-Sludge WW	-Wastewale	r GW-Groundwa	ter SW-Surfa	ce Water DW-0	Orinking Water	0-0il W-W	Vipes F-Filt	er .		
Cooler PresentYesN	No Internal Us	e Only	Preservation Code:	1-NP, 2-F	ICI, 3-H2SO4,	4-HNO3, 5-1	laOH, 6-MeC	H, 7-Asorbic	Acid, 8-Z	nAct, 9			·
Seals IntactYesNo NA:	[L] Pickup		Sampled by :	BO							. *"	, , , , , , , , , , , , , , , , , , , ,	·
Cooler Temperature: 13, 7	31 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	cian	Comments:										
Relinquished by: (Signature, Date & Time)	Received by: (Signature, Date & Time	2/1		Relinquished	by: (Signature,	Date & Time)	A	Received by: (S	ignature,	Date & Time) /4		
	14'75	1'75 markers 1717											
Relinquished by: (Signature, Date & Time)	teceived by: (Signature, Date & Time	}		Relinquisne	by: (Signature,	Date & Time)		Received by: (S	ignature, (Date & Time)		
•								:			*		,
* By circling MA-MCD client arkenylading compale ware		51 ()	lahomton, all oba								4		

Please fax to the laboratory all changes to Chain of Custody

Report Method Blank & Laboratory Control Sample Results

Pg 2 of 3

ESS La	borator	y		CHAIN OF CUSTODY					•	ESS Lab# 1507720					
Division of Ti	Division of Thielsch Engineering, Inc. Turn Time Standard Other								Reporting Limits - FPA - CI PPM						
185 Frances	Avenue,Ci	ranston RI 0291	0-2211	Regulatory S	State: MA RI	CT NH NJ NY	ME Ot	her	_ `		Reporting Li	mits - <u>12</u>	25/0 -		spm
Tel. (401)461 www.esslabo		ıx (401)461-448 ı				lowing:(please cir CE CT DEP				, El	ectonic Deliver	ables *E	xcel Acc	cess PDI	F
Co. Name	r	ENVIRONA		Project # 15 ~051	······································	Project Name Polloci(MENT	ARY						
Contact Person	HARTA			Proj. Location LOUIS	inna			-		Analysis					
		HILL RP	City , State 50770/		7Q	Zip 01590		PO#	-	Anal	2				
Tel.	27 -7:01 -1	1111 0 7	email:		7 94	013-70									
ESS Lab ID	Date	Collection Time	Grab -G Composite-C	Matrix	Sam	ple ID	Pres Code	# of Containers	Type of Container	Vol of Container	0				
08	7/30/15	10:25	6		W-4	1		1	A 6	-	\times				
09	7/30/15	10 25	G		E F	•		1	A6		X				
10	7/3915	10:30	G		6			L	A6		X				
11	7/30/15	10:30	G		H			1	A6		X				
12	7/30/15	10:35	6		エ			l	AG		×				
13	7/30/15	10'40	G		T			1	A6		X				
14	7/30/15	10:40	G		K			1	A6		×				
Container Type: P-Po	oly G-Glass AG-A	Amber Glass S-Sterile V-	VOA		Matrix: S-Soil S	D-Solid D-Sludge WW	/-Wastewate	r GW-Groundw	ater SW-Surfa	ce Water DW-0	Orinking Water O	⊢Oil W-Wip	es F-Filter		
Cooler Prese	ent	<u>√</u> Yes	_No	Internal Us	e Only	Preservation Code:	-	ICI, 3-H2SO4	4-HNO3, 5-1	NaOH, 6-MeC)H, 7-Asorbic A	icid, 8-ZnA	.ct, 9		
		No NA:_		[Pickup		Sampled by :	BL								
Cooler Temp	erature:	1.1,359	17'06	[] Technic	ian	Comments:		•			•				
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* By circling MA-MCC					mi c	laboratory all ch		A	·					·	

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ESS Laboratory	CH	IAIN OF CUS	STODY	ESS Lab	# 15	0723	30		
Division of Thielsch Engineering, Inc.	Turn Time X Standard Other				Reporting Limits - EPA - CIPPM				
185 Frances Avenue, Cranston RI 02910-2211	Regulatory State: MA RI	Topolog Common for the common for th							
Tel. (401)461-7181 Fax (401)461-4486	is this project for any of the following:(please circle)				Electonic Deliverables *Excel Access PDF				
www.esslaboratory.com	MA-MCP Navy USAC	Project Name /		 					
Co. Name STRATEGIC ENVIRONMENTAL	Project # 15-0515	PONOCK File	EMBNIA-1						
Contact Person	Proj. Location	Analysis							
RDSS HARTMAN City, State	60015 1/32-74	Zip	PO#] §	\varnothing				
362 PUTNAMHILL RD SUTTO	w m	01590	<u> </u>		e)				
Tel. emaii:		Pres	# of Type of	Vol of	0				
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19 7/30/15 10:50 G	W-9		1 96			1-1-			
20 1/30/15 10:50 G	pv-10		1 A6		X				
21 7/31/15 10:55 G	W-11		1 A6		入				
Contamer Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA	Watrix Scoil	Solid besinge WW-Wastew	ater W.Groundwater SW-Su	face Water DW-I	Drinking Water O-C	oil W-Wipes F-Filter	•		
Cooler Present Yes No	Internal Use Only	Preservation Code: 1-NP,	2-HCI, 3-H2SO4, 4-HNO3,	5-NaOH, 6-MeC	OH, 7-Asorbic Ac	id, 8-ZnAct, 9			
Seals Intact YesNo NA:	Pickup	Sampled by :							
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Report Method Blank & Laboratory Control Sample Results

collected in accordance with MADEP CAM VIIA

Appendix D: Waste Disposal Documentation



CERTIFICATE OF RECYCLING / DISPOSAL

LEI, Inc. certifies that all waste materials accepted are recycled or disposed of in accordance with all applicable Federal, State, and Local Regulations and within all regulated time periods.

EPA ID: LAR000055467 LA0000365668

Date:

12/9/2015

Document No:

002728173GBF

Invoice No:

55700

Qty	Description	U/M		
2 PCE	3 Contaminated Debris > 500ppm	55 gal		
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		. '		

CERTIFICATE ISSUED TO:

ARC ABATEMENT 1, LTD ATTN: MEREDITH FERGUSON 300 SOUTH 2ND STREET WACO, TX 76701 ITEMS OWNED BY:

POLLUCK ELEMENTARY SCHOOL 4001 HIGHWAY 8 POLLUCK, LA 71467

On Behalf of LEI

Larry Fannaly

Vice-President, Sales & Operations

LEI Phone: 985-878-3333 Fax: 985-590-5141 11441 Fontana Lane Independence, LA 70443 www.leirecycle.com

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Sales, James

From:

Sales, James

Sent:

Wednesday, February 17, 2016 10:22 AM

To:

Tisa, Kimberly

Subject:

FW: Hello. I wanted to follow up on activities at the Pollock Elementary School. Do you

have a status update for me?

Attachments:

Pollock Elementary School PCB Source Removal Report - Final.pdf

Kim—I have this school that removed the PCB caulk and now want to deal with the contaminated brick. They want a 61 c to encapsulate the brick as an interim solution before deciding what to do about the brick. Is this something we are approving? I thought that encapsulating doesn't really work..

From: Mitchell McCrea [mailto:mmccrea@baronbudd.com]

Sent: Tuesday, February 16, 2016 4:59 PM To: Sales, James <sales.james@epa.gov> Cc: Elena Rojo <erojo@baronbudd.com>

Subject: RE: Hello. I wanted to follow up on activities at the Pollock Elementary School. Do you have a status update for

me?

Hi, Jim. See the attached report, which has been given to the Grant Parish School District. We just received authorization from the School District to follow the recommendations outlined in Section 3.0 (see pg. 7), so would you please let me know if we can proceed with such recommendations? Thank you.

Mitchell McCrea

Baron & Budd, PC | Attorney

214.521.3605 main 214.523.6420 direct 214.498.7508 mobile

www.baronandbudd.com

Dallas | Austin | Los Angeles | Baton Rouge | New Orleans

From: Sales, James [mailto:sales.james@epa.gov] Sent: Tuesday, February 09, 2016 12:43 PM

To: Mitchell McCrea

Subject: RE: Hello. I wanted to follow up on activities at the Pollock Elementary School. Do you have a status update for

me?

Yes thank you—that would be fine

From: Mitchell McCrea [mailto:mmccrea@baronbudd.com]

Sent: Tuesday, February 09, 2016 12:42 PM To: Sales, James < sales.james@epa.gov>

Subject: Re: Hello. I wanted to follow up on activities at the Pollock Elementary School. Do you have a status update for

me?

Meeting with school district next week, so I'll have an update for you thereafter. Is that ok? All caulk has been removed.

Mitchell McCrea

Office: 214.523.6420 Cell: 214.498.7508

mmccrea@baronbudd.com

On Feb 9, 2016, at 12:34 PM, Sales, James < sales.james@epa.gov > wrote: